

Mind over Matter: Exploring the Power of a Positive Body Image

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Dedication

- To my Grandpa –

Who always told me to appreciate my education

Abstract

This dissertation examines positive body image and its relationship with appearance-related commentary, body weight, and impression formation among young adult women. It explores how women's unique individual experiences are constructed within social interactions. The present dissertation examined weight using a dynamic approach - weight trajectory (i.e., whether someone is gaining, losing, or maintaining weight).

In study 1, body appreciation and a body image coping strategy (i.e., positive rational acceptance coping), which are characteristics associated with positive body image, were tested as mediators in the relationship between the frequency of positive appearance-related commentary and the effect elicited from those compliments. Only body appreciation produced indirect effects, as the frequency of appearance compliments only impacted the effect felt from those comments through body appreciation as the processing mechanism.

In study 2, women were interviewed about their body image experiences with appearance-related commentary at differing weight trajectories. Women described how their body image was influential in filtering appearance-related commentary both while at higher and lower body weight. A more positive mindset (e.g., body acceptance), rather than weight loss, fostered positive effects from positive appearance-related commentary.

Study 3 determined whether information provided about a female target's weight trajectory and/or body image altered the participants' impression of that target. The target described as on a weight loss trajectory compared to a weight gain trajectory was rated more favourably on certain personality and physical characteristics. Further, the target described as having a positive body image (including high self-esteem) compared to a

target described as having a negative body image (including low self-esteem) was also rated more favourably on numerous personality and physical characteristics.

All three studies demonstrated the value of having a positive body image both from an *intrapersonal* and *interpersonal* perspective. This has important implications for future research and body image programs designed to foster positive body image.

Keywords: appearance-related commentary; body appreciation; filter; impression formation; weight trajectory

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Chapter 1: Introduction

Dissertation Outline

This dissertation uses an integrated article format, consisting of three separate manuscripts, accompanied by a general introduction and discussion. Therefore, some of the information will be repetitive across the document. However, each manuscript has been written to stand alone and thus, detailed information must be included within each article. Overall, the three manuscripts explored the complex relationship between positive body image and body weight within interpersonal relations.

Please note, to reduce stigmatizing language surrounding weight, “people first language” has been used where possible to reference weight, describing individuals with higher or lower body weight. The terms “overweight” or “obese” were only used in this dissertation to refer to specific terminology used in previous research or existing measures used within in the design.

Body Image

Body image is a multidimensional construct that represents an individual's perceptions, cognitions, affective responses, and behaviours directed toward the body (Cash & Smolak, 2011). Body image can be impacted by several different sources including, but not limited to: biological/genetic; developmental; societal/media; cultural; interpersonal; community, and spiritual/religious (Wood-Barcalow, Tylka, & Augustus-Horvath, 2010). Body image research has predominantly focused on understanding negative body image, which occurs as a result of an individual holding greater negative evaluations (e.g., body dissatisfaction) and/or excessive investment in his/her physical appearance (Cash & Strachan, 1999). Body image investment consists of the cognitive,

behavioural, and emotional importance one places on the body whereas body image evaluation refers to one's level of satisfaction or dissatisfaction with his/her body (Cash, 2004a). More specifically, negative body image has been likened to body image dissatisfaction but also includes the psychological outcomes associated with negative body image evaluations and the impact these have on one's life (Cash, 2004b). To capture the multidimensional aspects, Thompson and colleagues (1999) define negative body image (or body image disorder) as: "A persistent report of dissatisfaction, concern, and distress that is related to an aspect of appearance... [and] some degree of impairment in social relations, social activities, or occupational functioning..." (p. 11)

The prevalence of negative body image has been examined by several researchers. In one study, when asked about various body areas/attributes of concern, roughly half of the women surveyed reported some degree of dissatisfaction with their mid-torso, lower torso and weight, and 48% of women indicated an overall body image dissatisfaction (Cash & Henry, 1995). In addition, when looking at the consequences of one's body image on psycho-social functioning and well-being, Cash and Fleming (2002) found 20% of women indicated a negative effect on general life satisfaction, 35% reported an adverse effect on their ability to control their weight, and 7% stated a negative impact on relationships with friends. Negative body image has been associated with many negative physical, behavioural, and psychological outcomes. For example, body dissatisfaction and body image disturbance have been associated with symptoms of disordered eating (Stice, 2002; Wardle, Waller, & Rapoport, 2001), eating disturbances (e.g., extreme dieting and binge eating; Vartanian, Giant, & Passino, 2001); obesity (Darby, Hay, Mond, Rodgers, & Owen, 2007); depression (Denniston, Roth, & Gilroy, 1992;

Wiederman & Pryor, 2000); social anxiety (Cash & Fleming, 2002); and low self-esteem (Thompson & Altabe, 1991).

Body image concerns exist across the lifespan. In children, weight and shape concerns are the focus, although there are few differences between boys and girls at this developmental stage (Smolak, 2011). However, as children are exposed to gendered ideal body shape messages, boys' concerns reside around muscularity whereas girls are concerned with thinness (Smolak, 2011). In adolescence, girls' drive for thinness intensifies and remains stable over time when established, as extreme weight management techniques (e.g., fasting, dieting, laxatives, etc.) begin to emerge during changes to the body with puberty (Wertheim & Paxton, 2011). Adolescent boys have a drive for lean muscularity which is a desire to be lean while also wanting greater muscle size and strength (Ricciardelli & McCabe, 2011). Adult women continue to report dissatisfaction with their weight and certain body areas (e.g., stomach, hips, thighs) but dissatisfaction appears to stabilize within adulthood (Grogan, 2011). For men, studies suggest that they typically place less importance on their appearance across all ages compared to women and perceptions of health and fitness are better associated with their appearance evaluation (Grogan, 2011).

Given the vast research on negative body image, Tylka (2011) stressed how imperative a better understanding of *positive* body image is to ultimately produce the most effective preventative and treatment-focused efforts. As Tylka (2011) states, "current interventions designed to reduce negative body image may result in *neutral* body image" (p. 56). Thus, more research is needed on positive body image to provide a more holistic story.

Positive Body Image

In response to a call for a "paradigm shift" within the body image literature by Cash and Pruzinsky (2004), body image research has begun to examine *positive* body image and is the focus within this dissertation. As initially described by Striegel-Moore and Cachelin (1999), and extended by Tylka and Wood-Barcalow (2015a), positive body image is not simply the opposite (or absence) of negative body image. Positive body image has its own unique characteristics separate from negative body image. For example, in one of the first studies to examine positive body image, women identified as having a positive body image possessed distinct qualities compared to women identified as having a negative body image or normative body image discontent; they reported greater appearance satisfaction, less body image distress, fewer instances of weight cycling, less self-worth placed on appearance, and greater likelihood of using positive rational acceptance to cope with negative body image experiences (Williams, Cash, & Santos, 2004). In addition, women identified as having a positive body image expressed an overall more positive well-being, including: experiencing little emotional distress; feeling fairly content with their appearance; and believing their positive body image influenced their quality of life in a positive manner (Williams et al., 2004).

Positive body image characteristics. In summarizing what was known about positive body image from several studies, Tylka (2011) identified the following core characteristics associated with positive body image: 1) body appreciation, where there is appreciation for what the body can do rather than one's appearance; 2) body acceptance and love, which includes choosing to focus on one's assets rather than perceived flaws regardless of what the body actually looks like; 3) inner positivity influencing outer

demeanour, whereby one's inner optimism fosters positive outward behaviours; 4) broadly conceptualizing beauty, which emphasizes the diversity in beauty and not striving to meet a single unrealistic standard; 5) media literacy, which consists of an awareness regarding the unrealistic nature of media images and an active rejection of these idealistic portrayals; 6) unconditional acceptance from others, where people feel valued for these unique qualities by important people in their lives; 7) finding others with a positive body image, which is an active choice to surround oneself with like-minded positive people; 8) spirituality/religion, where one believes a higher power created them a certain way and to cherish that uniqueness; and 9) listening to and taking care of the body, which consists of engaging in healthy and enjoyable physical activity, eating behaviours and self-care out of respect for the body.

Body appreciation. Positive body image is multifaceted (Tylka & Wood-Barcalow, 2015a); currently, a multi-dimensional measure of positive body image does not exist. To date, positive body image has been operationalized primarily as body appreciation within body image research (Avalos, Tylka, & Wood-Barcalow, 2005), although other indicators have also been used, including body image flexibility, pride and intuitive eating. Body appreciation, which is a core characteristic of positive body image, is defined as, “appreciating the features, functionality and health of the body...it involves praising the body for what it is able to do, what it represents, and its unique features” (Tylka & Wood-Barcalow, 2015a, p. 5). For a woman to appreciate her body, her body does not need to align with cultural appearance ideals. The Body Appreciation Scale (BAS; Avalos et al., 2005) and the Body Appreciation Scale-2 (BAS-2: Tylka & Wood-Barcalow, 2015b) are scales designed to measure levels of body appreciation. The two

body appreciation scales assess several fundamental aspects of positive body image: positive evaluations and acceptance of the body, rejecting unrealistic appearance ideals, and engaging in respectful behaviours towards the body (Avalos et al., 2005; Tylka & Wood-Barcalow, 2015b). Thus, although body appreciation is only one construct of positive body image, the BAS and BAS-2 include the evaluative, investment and behavioural aspects of positive body image and represent the most holistic measures of body image that currently exist. Menzel and Levine (2011) noted that the BAS is the most comprehensive measure of positive body image that exists, leading Webb et al. (2015), in their review of measures of positive body image, to state that the “rapidly accruing investigations of body appreciation have catapulted the BAS to the centre stage of positive body image assessment” (p. 133). For these reasons, body appreciation was chosen as the indicator of positive body image for this dissertation.

Body appreciation has shown unique associations with overall higher well-being (e.g., self-esteem), better self-care (e.g., sun protection), and healthy eating behaviours (e.g., intuitive eating), over and above negative body image characteristics in young adult women (Andrew, Tiggemann, & Clark, 2016; Avalos et al., 2005; Tylka & Wood-Barcalow, 2015b). Other correlates of body appreciation include greater perceived body acceptance by others, higher self-compassion, lower appearance media consumption and lower self-objectification, social comparison and thin-ideal preoccupation (Andrew et al., 2016).

Holistic body image model. The holistic body image model (see Figure 1.1; Wood-Barcalow et al., 2010) is a model that reflects positive body image constructs and was created from interview data with college women identified as having a positive body

image along with information from experts in the body image research field. The model illustrates how three processes (reciprocity, filtering, and fluidity) and four structures (sources, filter, body investment, and body evaluation) can impact how information about the body is interpreted and internalized. Reciprocity, represented by the double-sided arrows in the model (linking the outer sources of body image development with the inner filter), emphasizes how the sources of body image information (e.g., culture, media, interpersonal relationships) influence body image *and* how people also affect these sources (e.g., by promoting positive body image in others) – thus, there is a reciprocal relationship between the sources and the filter. The second key process in this model is filtering. Depending on the nature of one's filter (i.e., negatively or positively-framed), a person may interpret or process body-related information in different ways (Wood-Barcalow et al., 2010). Therefore, someone with a more positively-framed filter (i.e., a protective filter) may internalize positive body-related information and reject or reframe negative information (Tylka, 2011). For example, a woman with a positively-framed filter is better able to reject unrealistic images of women in magazines rather than experiencing negative affect as a result of viewing them. The third process in the model is fluidity and was represented in four different ways, including: how the sources blend and impact one another; how body investment expands or contracts based on what information is filtered in (i.e., more or less body investment); the interaction between body investment and evaluation (i.e., how investment level can influence a more positive or negative evaluation); and the variations in body evaluation (i.e., the proportion of positivity or negativity).

For the present dissertation, the structure of particular interest is the filter within the middle layer of this model. The filter “consists of current affect (positive and negative), beliefs (rational and irrational), and perceptions (accurate and inaccurate) shaped by previous information that passed through the filter” (Wood-Barcalow et al., 2010, p. 111). The body-related information outlined within the holistic body image model with regards to filtering information (Wood-Barcalow et al., 2010) was predominantly focused on media information. However, while other sources certainly must exist, it is unknown whether the filter structure would work similarly with body-related information received from interpersonal sources (i.e., appearance-related commentary), which is the focus of studies 1 and 2 in this dissertation.

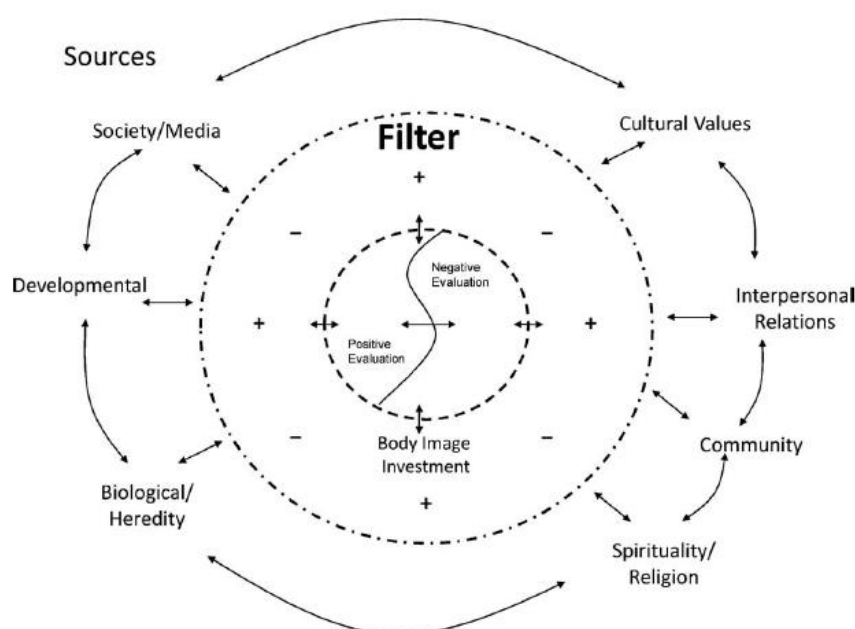


Figure 1.1. Holistic body image model (Wood-Barcalow et al., 2010). Permission from publisher for reuse in a thesis/dissertation from Elsevier, license #4095461390601.

Body Image and Appearance-related Commentary

Appearance-related commentary, an interpersonal relations source that can influence body image development, is defined as any negative or positive verbal feedback

one receives from other people that pertains to physical appearance (e.g., attractiveness, body shape or weight; Stormer & Thompson, 1996). Negative appearance-related commentary (i.e., criticisms, teasing) has received most of the research attention and has shown consistent associations with negative body image evaluation (e.g., greater weight dissatisfaction; Herbozo, Menzel, & Thompson, 2013), overall appearance dissatisfaction (Fabian & Thompson, 1989), and lower self-esteem (Myers & Rosen, 1999).

Positive appearance-related commentary (i.e., compliments, praise) has not been as extensively researched and studies have produced mixed results without the aid of key moderating variables. Simply looking at the perceived frequency of occurrence, some studies have found frequent positive appearance-related comments (i.e., including weight/shape and general appearance compliments) were associated with less harmful outcomes, such as: greater body esteem (McLaren, Kuh, Hardy, & Gauvin, 2004), better appearance evaluation (Herbozo & Thompson, 2006a, b), and less body dissatisfaction (Herbozo & Thompson, 2006b) regardless of women's weight status (Herbozo et al., 2013). However, when the perceived effect of the positive appearance-related comments (i.e., how positively or negatively each type of comment made the person feel) were considered, the story became less clear.

Women who indicated feeling a more *negative* effect from appearance compliments (i.e., weight/shape and general appearance) generally had less appearance satisfaction, greater body dissatisfaction and specifically from the general appearance compliments, had lower self-esteem (Herbozo & Thompson, 2006b). In addition, even women who felt a more *positive* effect from appearance compliments reported greater levels of certain negative body image characteristics, such as body surveillance, body

dissatisfaction, and trait self-objectification (Calogero, Herbozo, & Thompson, 2009).

Therefore, researchers began to explore other factors with appearance comments in order to provide more context.

The source (e.g., parents, siblings, peers) of appearance-related commentary has been explored with regards to the impact those comments can have on individuals. Children and adolescents indicate that negative appearance-related comments from their peers are the most frequent source (Cash 1995; Hayden-Wade et al., 2005; McLaren et al., 2004). Other research has found negative comments from both peers and their family members are associated with low self-esteem and depressive symptoms (Eisenberg et al., 2003). There has been mixed research with parental influence, as some studies indicate mothers have the largest impact on young girls' weight related attitudes and body esteem (Neumark-Sztainer et al., 2002; Smolak, Levine, & Schermer, 1999). However, young girls have also stated that negative appearance-related comments from fathers and older brothers can have a greater negative impact on their self-perceptions (Keery et al., 2005). Among young adults, negative comments from partners have also been associated with poor body esteem whereas positive comments from partners are associated with better body esteem (McLaren et al., 2004). However, when young adults received positive comments from their current partners it was not able to cancel out the negative effects experienced from childhood negative appearance-related commentary (McLaren et al., 2004). Thus, the effect from negative appearance-related comments during childhood appears to endure into adulthood for some individuals.

In addition to cross-sectional work, Fea and Brannon (2006) used an experimental design to examine how appearance compliments affected body image in relation to self-

objectification. Women in the experimental group were provided with a general appearance compliment (i.e., told they were a “nice looking person”) after a mock physical attractiveness appraisal. Results showed that women who were had high levels of trait self-objectification displayed less negative mood after receiving the appearance compliment (Fea & Brannon, 2006). Women who had low levels of trait self-objectification did not differ in their mood-state after receiving the compliment. Similarly, Tiggemann and Boundy (2008) provided women with a general appearance compliment (i.e., “I was just looking and I like your top, it looks good on you”) within their study design. They found women who received the appearance compliment did also report lower negative mood after but for those women with high trait self-objectification, they also experienced an increase in body shame following the appearance compliment (Tiggemann & Boundy, 2008).

Lastly, Calogero and colleagues (2009) also explored self-objectification as both a mediator and moderator variable with appearance-related commentary and body image variables. Women who were high in trait self-objectification reported greater body dissatisfaction when they indicated that weight/shape positive appearance-related comments had a more positive effect on them (Calogero et al., 2009). Thus, it is clear that women who are high in trait self-objectification tend to experience more body image disturbance with appearance compliments. However, it is unclear how positive appearance-related commentary is associated with *positive* body image as it has yet to be quantitatively examined in relation to appearance-related commentary. Based on qualitative evidence, more frequent appearance-related comments from other people do

not necessarily result in more a positive body image in women (Tylka & Wood-Barcalow, 2015a).

Appearance-related commentary can also be “ambiguous” and may be interpreted as either negative, positive or neutral by the person who receives the comment regardless of the intent (Herbozo & Thompson, 2010). For example, commentary like, “You look different since the last time I saw you” or “Have you been to the gym recently?” can be interpreted in numerous positive or negative ways. A person’s body image could shape how these types of ambiguous appearance-related comments are processed and the same comment could have a different impact depending on the person’s interpretation. Based on what is known regarding filtering media information, the holistic body image model (Wood-Barcalow et al., 2010), may help to explain how a negatively or positively-framed filter may influence how *any* type of appearance-related commentary is interpreted. Therefore, more research is needed to examine positive body image constructs as potential mediator or moderator variables with regards to the interpretation of appearance-related commentary. In addition, as people come in a variety of body shapes and sizes, it is important to gain a better understanding of how physical characteristics can influence how a person filters appearance-related commentary.

Body Image and Weight Status

According to Wood-Barcalow and colleagues’ (2010) holistic body image model, several sources can influence body image attitudes. One such source is biological/heredity characteristics (e.g., body weight, shape or type). As body weight has been one of the most influential factors for women’s body image (Gagne et al., 2012; Rodin, Silberstein, & Striegel-Moore, 1985; Tiggemann & Lynch, 2001), the present

dissertation focused on this construct. The research that has examined the relationship between body weight and body image has predominantly been focused on negative body image, and this relationship appears to be complex. In some cases, overweight and obese individuals tend to report higher body image concerns than non-obese individuals (Latner & Wilson, 2011; Schwartz & Brownell, 2004). However, in other studies, no relationship has been found between body mass index and body image dissatisfaction (Matz, Foster, Faith, & Wadden, 2002; Wilfley, Schwartz, Spurrell, & Fairburn, 2000). Additionally, it has been suggested there may be a threshold effect among some overweight or obese individuals regarding their body image (Foster & Matz, 2004; Sarwer & Thompson, 2002). In other words, the degree of body image distress does not appear to be proportional to the amount an individual is overweight. For example, if an overweight individual was to gain more weight, it may not necessarily lead to even more negative body image. There have been several factors identified within the literature that appear to influence the association between body weight and body image. As outlined in the holistic body image model (Wood-Barcalow et al., 2010) with double-sided arrows, the sources of body image information impact one another and do not influence body image in isolation. The sources that merge with the biological/heredity source of body weight that are pertinent to this dissertation are discussed further to provide context to the research that has been conducted thus far.

Gender. Looking at the intersections between biological/heredity and community values (e.g., standards of beauty) as sources of body image development, there are gender differences with regards to weight. Overweight women tend to experience greater body image distress compared to overweight men (Cash & Hicks, 1990; Cash & Roy, 1999;

Latner & Wilson, 2011) and are also more likely to self-classify themselves as overweight compared to men (Wardle & Johnson, 2002). The relationship between body weight and body image distress is also more linear with women than men. Conversely, in men the relationship appears to be more U-shaped as normal weight males report greater body satisfaction than underweight and overweight males (Kostanski, Fisher, & Gullone, 2004). The differences in weight satisfaction could be due to the different beauty standards within in Western culture for men and women and what is deemed “attractive” or “acceptable” with regards to body weight.

Weight stigmatization. Weight stigmatization, which often includes explicit negative appearance-related commentary, is an interpersonal relations source of body image development within the holistic body image model (Wood-Barcalow et al., 2010), and may be one of the biggest influences on the relationship between body weight and body image. In general, overweight and obese children report experiencing more stigmatization than normal weight children, as a result of their weight, and it has been argued that much of the body image distress that overweight or obese individuals experience can be attributed to the weight stigmatization they receive (Latner & Wilson, 2011; Puhl & Latner, 2007). In one study, in which weight-related teasing was controlled, body mass index was no longer significantly associated with negative psychological consequences, such as low self-esteem, depressive symptoms or suicide ideation (Eisenberg, Neumark-Sztainer, & Story, 2003). Therefore, much of the body image distress that overweight and obese individuals experience may be more aptly attributed to the stigmatization they receive (i.e., teasing, discrimination) rather than their actual body weight.

Another group of individuals who report stigmatization based on weight status are those who are underweight. Women who are underweight tend to receive slightly more frequent negative appearance-related commentary from others (e.g., nicknames such as "skinny bones" or "spaghetti sticks") compared to normal weight individuals (Kostanski & Gullone, 2007; Neumark-Sztainer et al., 2002). However, underweight women do not appear to be as affected by appearance-related commentary to the same extent as overweight or obese women (Neumark-Sztainer et al., 2002), possibly because underweight women are seen as closer to the Western ideal of thinness (Grogan, 2007).

Weight trajectory. An individual's weight trajectory (i.e., whether the individual is losing, gaining or maintaining weight) can potentially influence body image (Schwartz & Brownell, 2004). For example, two individuals who both weigh 175 lbs may not have the same body image if one individual has lost weight to arrive at 175 lbs and the other individual has gained weight to now weigh 175 lbs. There is some evidence to support the notion that body dissatisfaction becomes greater with an increase in body mass index (i.e., weight gain trajectory; Hill & Williams, 1998). Weight gain can occur for a myriad of reasons, including but not limited to: puberty, lifestyle behaviours, pregnancy, weight regain after dieting techniques stopped, medication, and metabolism changes with age. It is unclear if the reason behind weight gain can influence body image, however, this will not be explored within the present dissertation. Research has predominantly focused on the trajectory of weight loss in relation to reducing negative body image.

Weight loss trajectory and body image. In the literature that addresses body image improvement through weight loss interventions, there is evidence suggesting even a modest amount of weight loss can produce body image improvements. However, the

improvement in body image is not proportional to the amount of weight lost by an individual. Alternatively, *perceived* weight loss or *perceived* changes to body composition can also result in an improvement in body image, even if actual weight loss does not occur (Martin Ginis, McEwan, Josse, & Phillips, 2012). In one study examining a weight loss treatment program, Foster and colleagues (1997) saw an improvement in participants' appearance and body satisfaction following the treatment program. Even with a small amount of weight regain in the second half of the program, associated with some loss of body image improvements, appearance satisfaction levels were still higher at the end of the program compared to baseline levels (Foster, Wadden, & Vogt, 1997). However, weight loss does not always result in body image improvement. For example, formerly overweight individuals (i.e., previously overweight but currently a normal weight) often report weight-related anxiety (Cash, Counts, & Huffine, 1990) and weight preoccupation (Annis, Cash, & Hrabosky, 2004) similar to currently overweight individuals, demonstrating weight loss does not always mitigate previous weight concerns.

It is important to note that weight loss not only affects an individual's self-perceptions, it can also impact the perceptions held by others. Weight loss can lead to a positive perception by others (Mattingly, Stambush, & Hill, 2009), although a number of factors can impact this effect. For example, the method of weight loss appears to influence the perceptions others have of that individual. Mattingly and colleagues (2009) asked participants to provide their impressions of a formerly overweight individual. A target described as losing weight through a strict diet and exercise program was perceived to be less healthy than a target in the control condition (i.e., no mention of being

previously overweight). However, a target described as losing weight via a strict diet and exercise program was rated to be healthier and more attractive compared to a target described as losing weight through a surgical procedure (Mattingly et al., 2009). Therefore, the *perception* of the effort put into weight loss can alter the impression one forms of an individual. Although this may appear to be a favourable impression, it is likely because this individual is now viewed as someone complying with societal standards of weight and health in their pursuit of a thinner body. Thus, given the damaging health and psychological outcomes associated with weight-loss focused efforts (Bacon & Aphramor, 2011) other self-presentation tactics, aside from changes to the physical body, need to be examined.

Overall, there has been little research examining the relationship between body weight and positive body image (Iannantuono & Tylka, 2012; Tylka & Wood-Barcalow, 2014). One would expect that as a result of the stigmatization an individual who is overweight may experience, they would likely have lower levels of positive body image. However, a person does not have to think his or her body meets the cultural idea of physical attractiveness (e.g., thin body) to have positive body image (Tylka & Wood-Barcalow, 2015b). In addition, weight loss has been shown to be negatively associated with body appreciation (Andrew, Tiggemann, & Clark, 2016). Using the holistic body image model (Wood-Barcalow et al., 2010) to explore the relationship between body weight, weight trajectory and positive body image in this dissertation will provide a useful framework to guide exploration with how individual's process body-related information.

Dissertation Rationale

In summary, there is limited research investigating how body weight is related to positive body image – however, individuals who are higher weight can still experience positive body image. More research is needed surrounding the context of individuals with higher weight and body positivity. Further, one factor that has received almost no attention, especially in the context of positive body image, is an individual's weight trajectory. Given the dynamic nature of body image, examining weight as a static factor (i.e., body mass index), which has been the primary approach used in previous research, may not provide the most comprehensive understanding. It may be more beneficial to examine the relationship between body image and weight trajectory (i.e., losing, gaining, or maintaining body weight) to account for the dynamic nature of both variables. In addition, exploring the intersection of sources of body image development outlined in the holistic body image model (Wood-Barcalow et al., 2010) will likely provide greater insight. Therefore, the present dissertation sought to examine the connection between these factors, specifically biological/heredity (i.e., weight) and interpersonal relations (i.e., appearance-related commentary).

Ultimately, this dissertation explored the *intrapersonal* (i.e., within the individual) and *interpersonal* (i.e., between the individual and others) benefits of having a positive body image. More specifically, it looked at how positive body image constructs were related to an individual's own body image perceptions and if possessing a positive body image influenced others' perceptions. Positive body image was the common theme amongst all three manuscripts within this dissertation. Individuals who engage in healthy behaviours (e.g., physical activity, mindful eating) out of respect and appreciation for

their body challenge previously held beliefs that body discontent works to motivate individuals to adopt beneficial health behaviours (Crister, 2004; Heinberg, Thompson, & Matzon, 2001). If this belief were correct, such that higher body dissatisfaction motivated people to lose weight, then following this logic there would be very few overweight or obese individuals within our society. However, this is not the case. In fact, the opposite appears to be true as individuals with strong self-esteem are more likely to engage in healthy behaviours (Goss & Allan, 2010; Leary, Tate, Adams, Allen & Hancock, 2007). For a group of overweight adolescent girls, having greater body satisfaction predicted less weight gain over a five-year span compared to girls who had lower body satisfaction (van den Berg & Neumark-Sztainer, 2007). In addition, positive body image has been shown potentially to be a protective mechanism of physical health and psychological well-being (Andrew et al., 2016; Augustus-Horvath & Tylka, 2011; Avalos et al., 2005), as people who hold positive feelings toward their bodies tend to take better care of themselves, engaging in behaviours such as physical activity and healthy eating (Homan & Tylka, 2014; Tylka & Augustus-Horvath, 2011). Therefore, positive body image offers an alternative approach to health promotion initiatives that aligns with weight-inclusive approaches, whereby everybody is provided the opportunity to achieve health and well-being unrelated to body weight.

The present dissertation utilizes the holistic body image model (Wood-Barcalow et al., 2010) as a framework to guide the exploratory nature of this work and does not seek to theoretically test this model. To date, no study has theoretically tested this model, which is why the present study used it as a guiding framework. Within this dissertation, body appreciation has been operationalized as a cognitive processing schema, similar to

the conceptualization of Halliwell (2013), to expand our understanding of this positive body image construct as more than just an attitude.

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**Chapter 2: Study 1 - Understanding appearance-related compliments: Can positive
body image characteristics explain their impact?**

Introduction

Appearance-related commentary has predominately been investigated in terms of negatively-intended comments (i.e., teasing) and its associations with negative body image. Appearance-related commentary is defined as any negative or positive verbal feedback regarding physical appearance that one receives from others (Stormer & Thompson, 1996). Consistently, negative appearance-related commentary has been associated with poorer body image evaluation, including greater weight dissatisfaction (Herbozo, Menzel, & Thompson, 2013) and overall appearance dissatisfaction (Fabian & Thompson, 1989), as well as lower self-esteem (Myers & Rosen, 1999). Much less is known regarding positive appearance-related comments (i.e., appearance compliments) and body image.

The research examining the frequency of positive appearance-related commentary has been fairly consistent, as more frequent appearance compliments (both weight/shape and general appearance comments) are associated with less harmful outcomes, including: greater body esteem (McLaren, Kuh, Hardy, & Gauvin, 2004); better appearance evaluation (Herbozo & Thompson, 2006a, b); and less body dissatisfaction (Herbozo & Thompson, 2006b) regardless of women's weight status (Herbozo, Menzel, & Thompson, 2013). However, regardless of the intention someone has when providing an appearance-related comment, positive or negative, people may *interpret* that comment differently. This can result in different perceived effects (or impacts) from that comment. The Verbal Commentary on Physical Appearance Scale (VCOPAS; Herbozo & Thompson, 2006b) provides a measure to assess how positively or negatively each comment subsequently made the respondent feel on a five-point scale ranging from *very positive* to *very*

negative. Use of this subscale from the VCOPAS (Herbozo & Thompson, 2006b), to examine the perceived effect of positive appearance-related commentary (i.e., how positively or negatively each type of comment made the person feel), resulted in some mixed findings in the literature. Women who felt more *negative* impact from appearance compliments (i.e., weight/shape and general appearance) tended to have less appearance satisfaction, greater body dissatisfaction and lower self-esteem (from general appearance compliments; Herbozo & Thompson, 2006b). On the other hand, for those women who experienced a more *positive* effect from appearance compliments they engaged in more body surveillance, had greater body dissatisfaction, and trait self-objectification (Calogero, Herbozo, & Thompson, 2009).

In order to better understand how high levels of body image disturbance could occur in either instance (i.e., when women felt more *negative* and *positive* effects), potential mediator and moderator variables were explored. Fea and Brannon (2006) found that women who had high levels of trait self-objectification experienced a reduction in negative mood after they received an appearance compliment. Tiggemann and Boundy (2008) also found that women who reported higher self-objectification reported a lower negative mood after receiving an appearance compliment than women lower in self-objectification. However, these same women also experienced an increase in body shame after receiving that compliment (Tiggemann & Boundy, 2008). In addition, Calogero and colleagues (2009) found women with high self-objectification experienced greater body dissatisfaction when they reported feeling a more positive effect (as measured using the effect subscale on the VCOPAS; Herbozo & Thompson, 2006b) from an appearance compliment directed at their weight/shape. Despite trait self-objectification being a clear

moderating variable between the impact of appearance compliments and body image outcomes, little is known about other potential mediating or moderating factors, especially pertaining to positive body image characteristics. Based on qualitative evidence, more frequent appearance-related comments from other people do not necessarily result in more a positive body image in women (Tylka & Wood-Barcalow, 2015a). An example of this was shared by a participant in Wood-Barcalow and colleagues (2010) as she stated, “A million people can tell you you’re gorgeous but if you don’t think so, you’re not going to believe them (p.111). However, this relationship has yet to be investigated using a quantitative methods approach.

To date, no study has examined the relationship between appearance-related commentary and positive body image characteristics. In order to get the complete story with body image, exploring appearance-related commentary’s relationship with *positive* body image characteristics will provide additional information to the existing literature. Positive body image encompasses its own unique set of characteristics and is distinct from the absence of a negative body image (Striegel-Moore & Cachelin, 1999; Williams, Cash, & Santos, 2004). Research has shown that women who have a positive body image report greater appearance satisfaction, less body image distress, and tend to feel their body image has favourably influenced their daily life compared to women who have negative body image or normative body image discontent (i.e., slight body image concern but less distress and adverse effects on life overall compared to women with negative body image; Williams et al., 2004). In developing the Body Appreciation Scale (BAS), Avalos, Tylka, and Wood-Barcalow (2005) identified four central positive body image qualities, including: 1) favourable opinions of the body; 2) body acceptance; 3) respect

for the body by attending to its needs and engaging in healthy behaviours; and 4) protecting the body by rejecting unrealistic media portrayals of "ideal" bodies. Thus, given positive body image's distinctive characteristics from negative body image, it may be useful to understand the relationship between appearance-related commentary and positive body image.

The few studies that have explored the effects felt from positive appearance-related commentary have examined whether the effect felt from appearance compliments can predict negative body image characteristics (Herbozo & Thompson, 2006a, b; Calogero et al., 2009). However, it may be beneficial to examine factors that precede and potentially explain the effects felt from appearance compliments.

In the current study, the first mediator investigated was body appreciation, a characteristic of positive body image. Body appreciation, "is a way of valuing one's body and orienting cognitive processing to protect and promote a positive view of the body" (Halliwell, 2013, p. 509). The holistic body image model (Wood-Barcalow et al., 2010) depicts this notion of orienting cognitive processing with its filter structure. Women in this study described how using their positive body image schema, they selectively filtered in positive information sources, which helped to maintain their positive emotions, rational beliefs and realistic perceptions (Wood-Barcalow et al., 2010). The composition of the filter structure itself is continuously shaped by the information that is processed from the various sources (e.g., society/media, cultural values, interpersonal relations; Wood-Barcalow et al., 2010). Therefore, a person who receives more positive information from other people (e.g., appearance compliments) would likely construct a more positively-framed schema, which would in turn, help to maintain a positive effect. Previous studies

have examined body appreciation as a similar processing mechanism. In exploring a model of intuitive eating, Avalos and Tylka (2006) found body appreciation fully explained (i.e., mediated) the relationship between body acceptance by others and intuitive eating. Just as the present study and Avalos and Tylka (2006) hypothesized body appreciation to facilitate positive outcomes, other studies have also looked at the *protective* nature of body appreciation against negative emotions. Halliwell (2013) found that body appreciation was able to protect women from negative media exposure effects, especially for women who internalized the thin-ideal. More specifically, women who had high thin-ideal internalization and high levels of body appreciation indicated less of a media exposure effect (Halliwell, 2013). In another study, Andrew and colleagues (2015) extended this research to demonstrate the protective effects of body appreciation on body image from exposure to thin-ideal media images. The authors suggested that women who were higher on body appreciation likely chose to actively engage in protective strategies when processing media information (Andrew, Tiggemann, & Clark, 2015). Qualitative evidence suggests positive body image may facilitate a positive feeling from positive body-related information (Wood-Barcalow et al., 2010), as women with positive body image tend to engage in cognitive processing that maintains or promotes positive outcomes (e.g., positive evaluations of their body). Although, this has yet to be tested quantitatively to provide empirical support.

The second mediator explored how a potential body image coping strategy, positive rational acceptance coping, influenced the impact of appearance compliments. Webb and colleagues (2015) suggested investigating how positive self-talk (an element of positive rational acceptance coping) affects the interpretation of body information, such

as the impact felt from appearance-related commentary. Positive rational acceptance coping consists of behaviours that reflect realistic expectations rather than striving for unrealistic appearance ideals and consist of actions or strategies that promote self-compassion (e.g., engaging in positive self-talk/rationalization; Cash et al., 2005). Individuals who exhibit positive body image typically use positive rational acceptance coping more often than those who do not have positive body image (Williams et al., 2004). Body image coping strategies, including positive rational acceptance coping, have been tested as potential mediator and moderator variables in previous work (e.g., Choma, Shove, Busseri, Sadava, & Hosker, 2009). To date, no research has examined body image coping strategies with appearance-related commentary. For some women, receiving any type of appearance-related comment, even a positively intended one, may remind them that their bodies are on display and may trigger the need to utilize a body image coping mechanism. Thus, as an alternative mechanism to body appreciation, exploring positive rational acceptance coping as another potential mediator variable may be advantageous.

Overall, some women report appearance compliments having a more *positive* effect and others a more *negative* effect, compared to the more consistent negative effect experienced from negative appearance-related comments. Therefore, possible mechanisms that may offer a potential explanation as to why there can be different impacts from appearance compliments need to be explored. Although methodologically paired together in the Verbal Commentary on Physical Appearance Scale (Herbozo & Thompson, 2006b), the frequency and impact of appearance compliments subscales were treated as separate entities in the present study to explore potential explanations for this discrepancy in impact. It is believed that some form of cognitive processing happens

between receiving appearance compliments and the subsequent impact (i.e., effect) those comments typically have on an individual.

Purpose

The purpose of the present study was to examine whether body appreciation and/or positive rational acceptance coping mediated the relationship between the frequency of positive appearance-related commentary and the effect felt from positive appearance-related commentary.

Hypotheses

Hypothesis 1. It was hypothesized that body appreciation would fully mediate the relationship between the frequency of positive appearance-related commentary and the effect felt from positive appearance-related commentary (see Figure 2.1). More specifically, frequent positive appearance-related comments would likely trigger body appreciation cognitive processing, which would then result in a positive impact (i.e., effect) from positive appearance-related commentary. This hypothesis was exploratory in nature, although, conceptually-driven from Halliwell (2013) and Andrew and colleagues (2015), who found body appreciation protected women from negative media exposure effects. However, in the present study body appreciation was hypothesized to act as a *facilitator* to explain a positive impact from the frequency of appearance compliments rather than acting to *protect* against negative effects (Andrew et al., 2015; Halliwell, 2013). The holistic body image model (Wood-Barcalow et al., 2010) provided a framework to test this mediation hypothesis. The positive appearance-related commentary acted as the interpersonal relations source of body image development, with body appreciation acting as the processing filter structure, working to facilitate a positive

effect. The composition of the filter structure is molded by previous information processed through the filter and consists of current affect, beliefs, and perceptions (Wood-Barcalow et al., 2010). Thus, it was believed more frequent appearance compliments would activate body appreciation as the processing structure to facilitate a positive effect.

Hypothesis 2. It was hypothesized that positive rational acceptance coping would fully mediate the relationship between the frequency of positive appearance-related commentary and the effect felt from positive appearance-related commentary (see Figure 2.1). More specifically, frequent positive appearance-related comments would prompt the use of a body image coping strategy (in this case positive rational acceptance coping), which then results in a positive impact (i.e., effect) from positive appearance-related commentary. With respect to body image coping strategies, avoidance and appearance fixing coping strategies are used more often than positive rational acceptance coping in response to experiencing threatening body-related situations (Cash, 2002; Cash et al., 2005; Melnyk et al., 2004). Frequent appearance compliments may heighten women's awareness of their body and, in turn, trigger the use of a body image coping strategy. However, appearance compliments may not be considered threatening enough to employ avoidance or appearance fixing coping strategies, typically used in body-related threatening situations. Therefore, this hypothesis explored whether positive rational acceptance coping could facilitate a positive effect from appearance compliments.

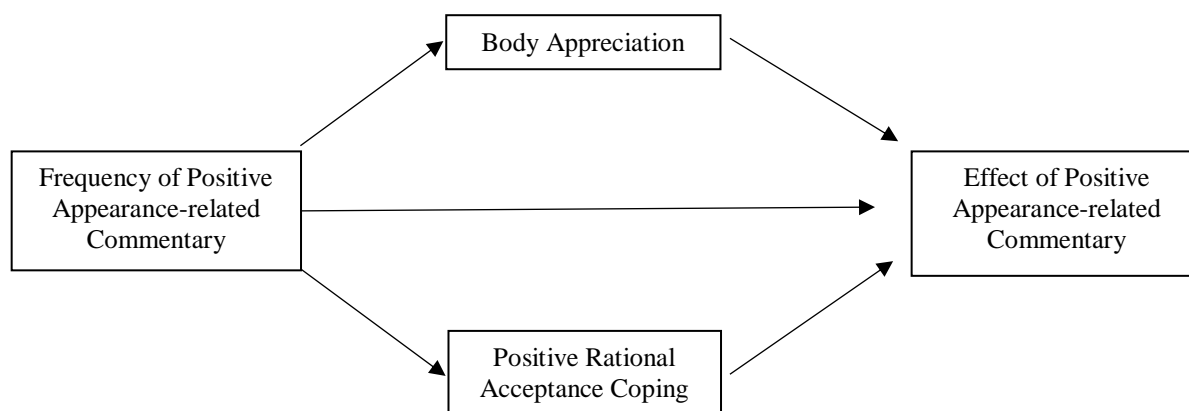


Figure 2.1. Path diagram for mediation analysis

Methods

Participants and Procedures

Participants ($N = 104$) were young adult women with a mean age of 21.68 years ($SD = 2.85$), a mean body mass index (BMI) score of 23.73 ($SD = 3.68$; range 17.80 to 40.80), predominantly identifying as Caucasian (85.6%), and mostly from kinesiology (20.2%), physical education (18.3%), and psychology (12.5%) degree programs. A calculation was performed to determine the number of parameters in the model based on recommendations from Streiner (2005), who suggests the sample size required depends on the degrees of freedom and the number of variables and parameters in the model. As our model had four variables (see Figure 2.1), we estimated 10 parameters in our model ($[4^2 + 4]/2 = 10$). Klein (1998) recommends a minimum of 10 cases per parameter, thus, we required a sample size of 100 participants to accurately estimate the values of the paths in our analyses. As the model in the current study is fairly simple, a smaller sample size is sufficient relative to larger sample sizes required for complex mediation models (Bearden, Sharma, & Teel, 1982; Bollen, 1990).

Ethics clearance was obtained from the university's research ethics board prior to data collection. Participants were recruited through posters placed around campus and

promotional announcements made in undergraduate classes to participate in a study about appearance-related comments and body image. Participants were provided with general themes of the research study to provide enough context to inform their participation decision, consistent with our ethics board requirements, but not revealing the purpose or specific hypotheses being tested. Upon arrival at the laboratory, participants provided informed consent. Then, participants completed via paper and pencil the demographic information followed by the questionnaire package either individually or in small groups (no more than three participants) in the laboratory, each at a private desk, which took approximately 20-30 minutes. The order of questionnaires was randomized to avoid order effects. Upon completion, the participants returned the questionnaire package to the researcher and objective height and weight measurements were taken in a private room within the laboratory. Participants were fully debriefed upon completion of the study both verbally and received a debrief form (see appendix study 1 materials) to take with them. The debrief form outlined the detailed purpose of the research study, critical information explaining body mass index, the researcher's contact information and local services that provide support if any participant was to experience emotional distress after leaving the laboratory.

Measures

The questionnaire package included an additional measure of body image appearance investment, however, that measure was not used in the present study. The following measures were used:

Demographic questionnaire. The participants self-reported their age, race, year in school, major in school, current height, and weight.

Body Appreciation Scale (BAS; Avalos et al., 2005). The BAS consists of 13 items and assesses the extent to which women: (a) hold favourable opinions of their bodies; (b) accept their bodies in spite of their weight, body shape, and imperfections; (c) respect their bodies by attending to their body's needs and engaging in healthy behaviours; and (d) protect their body image by rejecting unrealistic images of the thin-ideal prototype portrayed in the media. An example item is, "I take a positive attitude toward my body." BAS items are rated using a five-point scale, ranging from 1 = *never* to 5 = *always*. Scores were averaged to obtain an overall score where higher scores reflected greater body appreciation. In previous studies, the BAS has shown internal consistency reliability and validity scores in a sample using college women (Avalos et al., 2005). In the current study, the BAS demonstrated reliability with a Cronbach's alpha value of .93.

Verbal Commentary on Physical Appearance Scale (VCOPAS; Herbozo & Thompson, 2006a). The VCOPAS consists of three conceptual subscales: negative weight and shape comments (10 items; e.g., "Your outfit makes you look fat"), positive weight and shape comments (five items; e.g., "You have a nice body"), and positive general appearance comments (six items; "You have a beautiful smile"). The two positive subscales were combined to form a composite average score to represent the total positive appearance-related commentary variable for analysis, as previously done by Bailey and Ricciardelli (2010) with acceptable internal consistency.

VCOPAS –frequency. This measurement subscale is a 21-item instrument that assesses the frequency of negative and positive appearance-related commentary that participants receive over the past two years. Participants report how often they received each type of comment using a 5-point scale ranging from 1 = *never* to 5 = *always*.

VCOPAS – effect. This 21-item measurement subscale assesses the perceived effect of the negative and positive comments (i.e., emotion/feeling) participants report receiving over the past two years. Participants indicate how each item made them feel using a 5-point scale ranging from 1 = *very positive* to 5 = *very negative*.

Evidence of validity and reliability of the VCOPAS have been demonstrated for undergraduate female university students (Herbozo & Thompson, 2006a). Only the total positive appearance-related commentary and the effect felt from positive appearance commentary subscales were used in analyses to maintain focus on the intended purpose of the present study. An average frequency and effect subscale scores were calculated, where higher scores reflected more frequent and more negative effect felt from appearance-related comments, respectively. Both the positive appearance-related commentary frequency and effect subscales showed reliability with Cronbach's alpha values of .81 and .82, respectively.

The Body Image Coping Strategies Inventory (BICSI; Cash, Santos, & Williams, 2005). The BICSI is a 29-item questionnaire that assesses coping strategies with respect to body-related situations. Only the positive rational acceptance coping subscale was used (11 items; e.g., "I remind myself of my good qualities"). Participants indicated how well each way of coping described what they actually do or would do regardless of the helpfulness of the strategy on a four-point scale ranging from 1 = *definitely not like me* to 4 = *definitely like me*. An average score was calculated for the positive rational acceptance coping subscale where higher scores represented that item was more characteristic of how the participant usually copes with an event. This measure

was validated in a sample of young adult women (Cash et al., 2005) and showed adequate reliability in the present study with a Cronbach's alpha value of .75.

Body mass index (BMI). The researcher objectively measured height and weight using standard laboratory procedures (i.e., shoes off) and these values were used to calculate each participant's BMI for demographic description purposes.

Data Analysis

A path analysis was conducted to determine whether body appreciation and positive rational acceptance coping mediated the relationship between the frequency of positive appearance-related commentary and the effect felt from positive appearance-related commentary (see Figure 2.1 for path diagram). Prior to analyses, all regression assumptions for path analyses were checked. The first step was to run regression analyses to yield path coefficients for each pathway in the diagram. For every endogenous variable (i.e., outcome variable), a multiple regression analysis was calculated (Pedhazur, 1997). Therefore, three regressions were run: 1) one to predict body appreciation from frequency of positive appearance-related commentary; 2) one to predict positive rational acceptance coping from frequency of positive appearance-related commentary; and 3) one to predict the effect (i.e., feeling) elicited from positive appearance-related commentary from three predictors: body appreciation; positive rational acceptance coping strategies; and frequency of positive appearance-related commentary. The beta weights (i.e., standardized regression weights) from each regression analysis and the overall percent of variance explained (R^2 value) in each regression were assigned to their respective paths in the diagram (see Figure 2.2 in results section). To examine the mediation effects of body appreciation and positive rational acceptance coping, bootstrapping analysis was

conducted to provide accurate statistical estimates for direct and indirect effects at 95% confidence intervals of 5000 resamples. Bootstrapping has been recommended for small samples in mediation analysis (Preacher & Hayes, 2004). Hayes (2009) reported, bootstrapping has been shown to be the more valid and powerful method than other techniques in simulation research.

Results

There were five cases identified as statistical outliers and they were deleted and replaced with the series mean for each variable (i.e., two cases for body appreciation; one case for frequency of positive appearance-related commentary; and two cases for positive rational acceptance coping). The assumptions for a linear regression (including specific path analysis) assumptions were run based on the recommendations of Field (2013) and Tabachnick and Fidell (2007). Univariate normality was met for all four study variables as skewness and kurtosis values all fell under ± 1.0 and histograms illustrated normal curves. The outcome variable, the effect felt from positive appearance-related commentary, was slightly bounded in that the variability for our outcome variable ranged from 1 to 3.09 on a possible scale ranging from 1 = *very positive* to 5 = *very negative*. However, given the nature of the positively-framed question, the responses were expected to be bounded towards the lower end of the scale (i.e., towards the positive effect). No multivariate outliers were identified using Mahalanobis' distance tests as all cases were below the critical value ($\chi^2 = 13.28$; $df = 4$ at $p < .01$). Bivariate scatterplots were visually inspected and showed evidence for linear relationships between the four study variables. Durbin-Watson tests were run to determine if the assumption of independence of errors was met. Field (2013) states a score of 2.0 indicates residuals are independent, with a

conservative rule stating scores should range between 1.0-3.0. Durbin-Watson scores for the present study variables, ranged from 1.81-2.12, thus, this assumption was met. Lack of multicollinearity was met as all tolerance and variance inflation factor (VIF) scores were close to 1.0 (.89-1.11). Scatterplots of the standardized residual values of the dependent variable and predictor variables indicated even distribution across the scatterplot therefore, homoscedasticity of residuals was met. Lastly, univariate normality of residual distributions was checked by visually inspecting histograms of the standardized error terms. All histograms showed evidence of normal distribution, thus, this assumption was met.

Bivariate correlations and mean scores are shown in Table 2.1. The mean score for body appreciation ($M = 3.63$) was similar to values in previous studies (Avalos et al., 2005; Halliwell, 2013; Tiggemann & McCourt, 2013; Tylka, 2013). The mean score for positive rational acceptance coping ($M = 2.63$) was greater than values seen in other studies (Cash et al., 2005; Choma et al., 2009; Williams et al., 2004). For the mean frequency of positive appearance-related commentary ($M = 2.90$), the value was lower than observed in previous research using a total positive appearance-related commentary score (Ricciardelli & Bailey, 2010), however, the mean effect subscale was fairly similar to previous work (Herbozo & Thompson, 2006b). The correlation between the frequency of positive appearance-related commentary and the effect of those comments in the present study ($r = -.13$) was similar in direction (i.e., more frequent appearance compliments are associated with a more positive impact) to previous work but was weaker magnitude (Herbozo & Thompson, 2006b). To date, no studies have examined the correlations between appearance-related commentary and their effect to make

comparisons to how they relate to positive rational acceptance coping and body appreciation.

Table 2.1

Correlations and Mean scores.

	1	2	3	4
1. Body appreciation	-	.25**	.27**	-.23*
2. PRA coping	-	-	.25*	-.04
3. Frequency of positive AC	-	-	-	-.13
4. Effect felt from positive AC	-	-	-	-
Mean (SD)	3.63 (.63)	2.63 (.39)	2.90 (.57)	1.82 (.50)

Note. Body appreciation measured on a 5-point scale; PRA = positive rational acceptance coping, measured on a 4-point scale; AC = appearance-related commentary, frequency and effect measured on a 5-point scale. ** $p < .01$; * $p < .05$.

Next, three linear regressions were run to evaluate the model. In the first regression, the effect felt from positive appearance-related commentary was not significantly predicted from positive rational acceptance coping, body appreciation, or frequency of positive appearance-related commentary, $F(3, 100) = 2.02$, $p = .116$, $R^2 = .06$, adjusted $R^2 = .03$. However, Rucker and colleagues (2011) propose that researchers should, “shift attention to testing the mediation effect itself and not constrain themselves by placing undue emphasis on the significance of the predictor to outcome relationship” (p. 360). Therefore, the non-significant predictor to outcome relationship within the path analysis did not preclude any potential indirect effects (Preacher & Hayes, 2004; Rucker

et al., 2011). Body appreciation was significantly predicted from the frequency of positive appearance-related commentary, $F(1, 102) = 8.03, p < .01, R^2 = .07$, adjusted $R^2 = .06$. Positive rational acceptance coping was significantly predicted from the frequency of positive appearance-related commentary, $F(1, 102) = 6.64, p < .05, R^2 = .07$, adjusted $R^2 = .06$. The path coefficients for the complete model are displayed in Figure 2.2. It is worth noting, the negative standardized coefficient between body appreciation and the effect felt from positive appearance-related commentary (-.21) is a result of the effect rating scale, as the scale ranges from 1 = *very positive* to 5 = *very negative*. Thus, a lower score indicates a more positive emotional effect elicited from the comment. The model was able to account for 7% of the variance in body appreciation, 6% of the variance in positive rational acceptance coping, and 6% of the variance in the effect felt from positive appearance-related commentary. As a significant total effect was not present, indirect effects (instead of mediation effects) were investigated next (Preacher & Hayes, 2004).

To test the indirect effects of body appreciation and positive rational acceptance coping within this model, bootstrapping was conducted using Preacher and Hayes' (2008) macro procedure syntax. The indirect effect was tested using the bootstrapping procedure for both pathways.

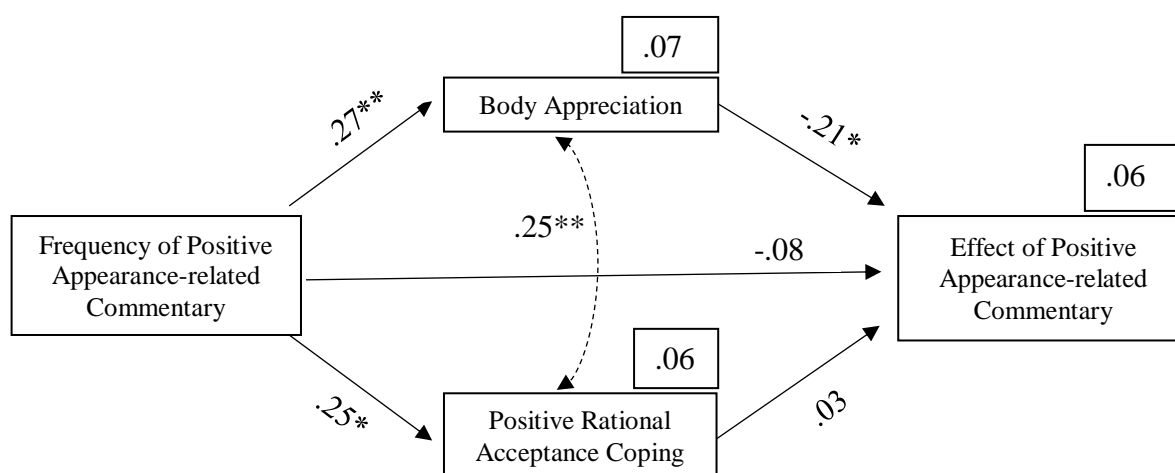


Figure 2.2. Path diagram with standardized regression coefficients along the arrows and R^2 values within square textboxes above outcome variable. ** $p < .01$; * $p < .05$.

Unstandardized indirect effects were computed for each of 5,000 bootstrapped samples, and the 95% confidence interval was computed. For body appreciation, the bootstrapped unstandardized indirect effect was -.05, and the 95% confidence interval ranged from -.1345 to -.0015. As zero did not fall between the two intervals, the indirect effects for body appreciation were statistically significant. This indicates body appreciation had an indirect effect on the effect felt from positive appearance-related commentary such that the frequency of positive appearance-related commentary had an indirect effect on the impact of appearance compliments only through body appreciation. For positive rational acceptance coping, the bootstrapped unstandardized indirect effect was -.0019, and the 95% confidence interval ranged from -.0561 to .0516. Therefore, as zero fell between the two intervals, there was no significant indirect effect with positive rational acceptance coping.

Note. A moderation analysis was run to explore if body appreciation could moderate (instead of mediate) the relationship between the frequency of positive appearance-related commentary and the impact of those comments (see Appendix). However, no evidence of moderating effects of body appreciation were found in the

relationship between the frequency of positive appearance-related commentary and the effect of those compliments.

Discussion

The overall purpose of this study was to examine two potential mediators, body appreciation and positive rational acceptance coping, to explain the relationship between the frequency of positive appearance-related commentary and the effect felt from positive appearance commentary. Although a significant total effect was absent, and as a result the potential for mediation was eliminated, the indirect effects were still explored. Rucker and colleagues (2011) suggest that a stronger indirect effect rather than a total effect may transpire if an independent variable exerts a stronger influence on a mediator variable compared to the independent variable's influence on the outcome variable. As the independent variable in the present study (i.e., frequency of positive appearance-related commentary) had a stronger influence on the mediator variable (i.e., body appreciation), this may have contributed to the stronger indirect effects, rather than a total effect. Another potential reason for the absence of a direct link could be a reflection of the mixed impact positive appearance-related comments can produce (e.g., some report feeling more *positive* whereas others report feeling more *negative*), as past research has found a weak association between the frequency and effect subscales of positive appearance-related commentary (Herbozo & Thompson, 2006b). The frequency of positive appearance-related commentary was also not significantly correlated with the effect felt from those appearance compliments in the current study.

The first hypothesis was not supported, as body appreciation did not fully mediate the relationship between the frequency of positive appearance-related commentary and

the impact of those comments. However, significant indirect effects were found, as the frequency of positive appearance-related commentary had an indirect effect on the impact of those appearance compliments through body appreciation. To our knowledge, this was the first study to examine positive appearance-related commentary in relation to a positive body image characteristic (i.e., body appreciation). The findings from the present study provide additional insight into understanding positive appearance-related commentary (Striegel-Moore & Cachelin, 1999; Williams et al., 2004).

Body appreciation, a key component of positive body image, orients cognitive processing to promote positive thoughts and feelings about the body (Halliwell, 2013). The present study provides empirical support to the holistic body image model (Wood-Barcalow et al., 2010) as the results indicated frequent appearance compliments triggered body appreciation processing (similar to the filter structure), which then facilitated a positive impact from the comments. The women in Wood-Barcalow and colleagues' (2010) study described how their positive image schema helped them to selectively filter in positive body-related information from interpersonal sources which helped to maintain positive effects. Therefore, the present findings offer support to the women's accounts which helped form the holistic body image model (Wood-Barcalow et al., 2010) as the significant indirect effect suggests that frequent appearance compliments trigger body appreciation (i.e., positive filter to process information) which works to maintain a positive impact from the comments. Body appreciation has been found in previous studies to play a mediating role with eating behaviours and body image (Avalos & Tylka, 2006; Augustus-Horvath & Tylka, 2011), protecting from negative outcomes. In addition, Halliwell (2013) found evidence of body appreciation working as a protective factor

against negative media exposure effects. The present study demonstrates how body appreciation can also *facilitate* positive effects in addition to *protecting* against negative ones found in other work. Tylka (2011) describes how positive body image, such as body appreciation, provides individuals with a cognitive schema that helps promote positive effects and protect against negative incoming body-related information in a self-preserving manner. Ultimately, it was through body appreciation that a positive impact ensued from appearance compliments.

Unconditional acceptance from others has also been identified as a key characteristic to positive body image (Tylka, 2011). Support may come in many forms; one avenue may be positive body-related information (i.e., appearance compliments). However, as Tylka (2011) suggests, “Although environmental factors shape body image, people with a positive body image also shape their environments” (p. 58). While women may be able to surround themselves with positive people who may be more likely to provide positive appearance-related commentary, it is a reciprocal relationship, as positive body image characteristics, such as body appreciation, ultimately affect the interpretation of appearance-related information regardless of the intent.

Positive rational acceptance coping did not mediate the relationship, contrary to our second hypothesis, nor was there a significant indirect effect. As stated earlier, a call was put forward within the literature to explore how positive self-talk may affect the interpretation of body information (Webb et al., 2015). To date, no previous research had looked at the relationship between positive rational acceptance coping and the effect felt from positive appearance-related commentary. Women who indicate using positive rational acceptance coping, which includes positive self-talk, report experiencing more

positive body image in general, have higher levels of self-esteem, higher body image quality of life and are less likely to define their self-worth by appearance compared to women who do not use often use positive rational acceptance coping (Cash et al., 2005). Although it was hypothesized that appearance compliments could bring attention to the body, potentially triggering the use of a positive rational acceptance coping strategy, this variable did not help explain the effect felt from those comments in the present study. Perhaps positive appearance-related commentary does not generate enough of a threat, even though it may bring unwanted focus on physical appearance evaluation, to elicit the need for a coping strategy to be utilized.

Limitations

Despite the important contributions of the current study, there were some limitations. First, the mediation analysis was cross-sectional and not longitudinal. Although cross-sectional mediation is often used in psychological disciplines, it still presents some limitations. The VCOPAS (Herbozo & Thompson, 2006a, b) asks participants to rate how often they have been the recipient of a such a comment or similar comment and how that comment made them feel based on their exposure in the last two years. The BAS (Avalos et al., 2005) assesses one's general disposition with regards to overall love and respect for the body. Given that the BAS (Avalos et al., 2005) is considered a trait measure, it was believed to have been fairly stable across the two-year period in which participants were recalling appearance-related commentary. However, current levels of BAS measured at the time of study could have been different for some participants across that two-year period in which they were responding to appearance-related commentary assessments. In addition, because of the cross-sectional design, the

present study can only make inferences based on associations between variables and cannot infer causal relationships between variables. Second, given the exploratory nature of the present study (i.e., it was the first to examine the relationship between positive body image and positive appearance-related commentary), the two VCOPAS subscales (positive weight/shape comments; positive general appearance comments) were combined to form a composite total positive appearance compliments score. Although this has also been done in previous work (Ricciardelli & Bailey 2010), it may have been a limitation in the present study. The two subscales have shown independent internal consistency (Herbozo & Thompson, 2006a, b; Calogero et al., 2009) and therefore, future work could examine them separately within this study's design as unique predictors in the mediation model. Third, the present study examined this relationship among young adult women who were primarily Caucasian, thus, the results may be different among other populations. For example, gender, race, ethnicity, age, or physical ability may affect the type or frequency of appearance-related commentary individuals receive and would likely alter the impact those comments can elicit. In a recently published study, using a more ethnically diverse sample of women, African American and Latina American women indicated stronger negative impacts from positive weight/shape appearance-related comments compared to European American women (Herbozo, Stevens, Moldovan, & Morrell, 2017). More ethnically diverse participant demographics could represent greater variation in body appreciation levels (Tiggemann, 2015). Lastly, even though the present study had a sufficient sample size based on the number of parameters in the proposed model (Streiner, 2005), the smaller-scale sample size may have contributed to the absence of an initial total effect.

Future Directions

Future studies could explore other positive body image characteristics, such as body pride, body image flexibility, unconditional acceptance from others, or intuitive eating behaviours to see if there is a similar indirect effect like that of body appreciation in the present study or even a possible full mediation effect. Slight alterations to the present study's mediation model could also make for interesting future studies. For example, since positive rational acceptance coping was highly correlated to body appreciation, it may be beneficial to test the sequencing with body appreciation and positive rational acceptance coping working alongside one another sequentially in the pathway rather than as separate mediators. Another example could be testing an alternative ordered model whereby the effect felt from appearance compliments was explored as the mediator variable in the relationship between the frequency of appearance compliments and body appreciation. This alternative order would test body appreciation more as an outcome body image attitude compared to a cognitive processing variable as conceptualized in the present study. Also, future studies could examine the protective nature of body appreciation by substituting negative appearance-related commentary in place of positive appearance-related commentary in the present study's mediation model. This could add insight into the protective capability of body appreciation in processing appearance-related commentary to supplement the positive facilitation found in the present study. Along those lines, exploring a moderation model with appearance-related commentary and body appreciation may offer useful implications for future studies if the level of body appreciation can change the direction or strength of the relationship between the frequency and impact of appearance-related commentary. Future

interventions studies could then target body appreciation as a mechanism of change in order to help women interpret appearance-related information. Lastly, researchers may want to use a qualitative research approach to further explore this phenomenon and unpack the mechanisms women believe can affect their interpretations of appearance-related commentary. This design approach may provide greater insight into how women manage appearance-related commentary and if women who feel positive from appearance compliments are relying on this type of information as external validation. Future qualitative research studies could also explore how the source of appearance compliments impact the individual, as most quantitative measures fail to address this aspect. It is also unknown at this point whether it is more beneficial for women's body image to filter in positive appearance-related information or reject all body-related information in any form.

Conclusions

The present study added empirical support for the holistic body image model (Wood-Barcalow et al., 2010). The indirect effects found in the present study complimented what the women described in their interview accounts (Wood-Barcalow et al., 2010), as having a positive cognitive disposition (e.g., body appreciation) facilitated a positive impact from appearance compliments. To date, no study has examined the relationship between positive body image characteristics and positive appearance-related commentary. The exploratory nature of the present study established relationships between these two constructs and a starting point for future studies. In addition, the present study demonstrated how body appreciation can facilitate positive effects from appearance compliments. As one cannot necessarily control the frequency at which they

receive positive appearance-related commentary, one can control *how* that information is cognitively processed. The present study showed how the frequency of appearance compliments had a significant indirect effect on those comments through body appreciation. Educating young women about their capacity to *regulate* how appearance-related information can be cognitively processed with appreciation for the body, and not passively internalized, may be an effective strategy to facilitate positive effects.

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Transition from study 1 to 2

In the first study, we established that there was an indirect effect from the frequency of positive appearance-related commentary to the impact of those comments through body appreciation. As intended, the first study provided quantitative support for the holistic body image model (Wood-Barcalow et al., 2010), that was created from interview data using grounded theory with regards to a positive cognitive processing schema (e.g., body appreciation) and appearance-related commentary. Although the first study provided some preliminary understanding of the relationship between positive body image and positive appearance-related commentary, unanswered questions remained with regards to how body weight could influence this dynamic. For example, do women process appearance-related commentary differently depending on the size of their physical body? In order to best answer these questions, a qualitative research design would provide the rich, descriptive information needed to gain a better perspective.

Therefore, to expand upon the quantitative findings in study 1 we wanted to explore some of the potential reasons *why* body appreciation, or positive body image in general, indirectly explained the relationship between the frequency and effect of positive appearance-related commentary. In study 2, we explored both positive and negative appearance-related commentary and how changes to the physical body (i.e., when higher or lower weight) ultimately contributed to body image experiences. We believed that exploring the phenomenon of body image experiences women had with appearance-related commentary at different weight trajectories would add greater depth to the findings from study 1 and provide a better understanding of information processing with regards to appearance-related commentary.

Chapter 3: Study 2 - “It’s such a crazy journey:” Exploring women’s body image experiences with appearance-related commentary and weight loss

Introduction

The research that has examined the relationship between body weight and body image has predominantly been focused on negative body image, and this relationship appears to be complex. In some cases, overweight and obese individuals tend to report greater body image concerns than non-obese individuals (Latner & Wilson, 2011; Schwartz & Brownell, 2004). However, in other studies, no relationship has been found between body mass index and body image dissatisfaction (Matz, Foster, Faith, & Wadden, 2002; Wilfley, Schwartz, Spurrell, & Fairburn, 2000). Additionally, it has been suggested there may be a threshold effect among some overweight or obese individuals regarding their body image (Foster & Matz, 2004; Sarwer & Thompson, 2002), such that the degree of body image distress does not appear to be proportional to the amount an individual is overweight. For example, gaining more weight may not necessarily lead to an even more negative body image for an overweight individual.

To help provide some clarity to the inconsistent relationship between body weight and body image, other contributing factors have been explored. An individual's weight trajectory (i.e., whether the individual is in the direction of losing, gaining or maintaining weight) is one factor that could potentially influence body image (Schwartz & Brownell, 2004). For example, two individuals who both weigh 150 lbs may not have the same body image - one of them could have lost weight to arrive at 150 lbs and the other could have gained weight to now weigh 150 lbs. In comparison to weight gain or weight maintenance, the weight loss trajectory has predominantly been examined in its associations with body image. Overall, weight loss has been correlated with a reduction in negative body image, with some regression in body image improvements with weight

regain (Foster, Wadden, & Vogt, 1997; Latner & Wilson, 2011; Sarwer, Dilks, & Spitzer, 2011; Schwartz & Brownell, 2004). However, the improvement in body image does not appear to be proportional to the amount of weight lost by an individual, thus, greater weight loss does not necessarily result in a greater body image improvement (Latner & Wilson, 2011).

Another contributing factor that has been explored is weight stigmatization (i.e., weight bias or negative appearance-related comments). In general, overweight and obese children report experiencing more societal stigmatization than normal weight children as a result of their weight, and it has been argued that much of the body image distress overweight or obese individuals experience can be attributed to the weight stigmatization they receive (Latner & Wilson, 2011; Puhl & Latner, 2007). In one study, in which weight-related teasing was controlled, body mass index was no longer significantly associated with negative psychological consequences, such as low self-esteem, depressive symptoms or suicide ideation (Eisenberg, Neumark-Sztainer, & Story, 2003). Therefore, much of the body image distress overweight and obese individuals experience can be attributed to the stigmatization they receive (i.e., teasing, discrimination) rather than their body weight.

One form of weight stigmatization may result from appearance-related commentary, specifically negative comments. Individuals with a higher body mass index are more likely to report receiving negative appearance-related comments (e.g., being teased about weight) and report feeling more upset by negative comments compared to individuals who are not overweight (Faith et al., 2002; Falkner et al., 1999; Hayden-Wade et al., 2005; Janssen et al., 2004; McLaren, et al., 2004; Neumark-Sztainer et al.,

2002; Quinlan et al., 2009). In addition, negative appearance-related commentary has consistently been associated with negative body image (Eisenberg et al., 2003; Herbozo & Thompson, 2006a; 2006b; Herbozo, Menzel, & Thompson, 2013).

While much of the research has focused on negative appearance-related commentary, people may also receive positive appearance-related comments from others. Although not considered stigmatizing, positive appearance-related commentary may also affect body image. While intended to compliment an individual's appearance, positive appearance-related commentary may bring unwanted attention directed towards the body. Positive appearance-related commentary (i.e., appearance compliments), can result in different impacts experienced from those comments. In some cases, when women indicate feeling more negative as a result of appearance compliments about their weight/shape and general physical appearance, these women also tend to have less appearance satisfaction, greater body dissatisfaction and lower self-esteem (Herbozo & Thompson, 2006b). Women have also reported a reduction in negative mood after receiving an appearance compliment but this was only in women who had high trait self-objectification (Fea & Brannon, 2006; Tiggemann & Boundy, 2008) and was also accompanied with an increase in body shame for some women (Tiggemann & Boundy, 2008). Along those lines, Calogero and colleagues (2009) found women high in trait self-objectification reported greater body dissatisfaction after feeling more positive from an appearance compliment about their weight/shape. However, positive appearance-related commentary has also been associated with less negative body image, regardless of weight status (Herbozo et al., 2013).

To gain a better understanding of how women respond to appearance-related commentary, one approach would be to examine how positive body image can influence the way in which comments impact an individual. Positive body image has been defined as having feelings of love and respect for the body, allowing individuals to appreciate their body's unique qualities and capabilities (Tylka, 2011). The core characteristics of positive body image include: body appreciation, body acceptance and love, inner positivity influencing outer demeanour, broadly conceptualizing beauty, media literacy, unconditional acceptance from others, finding others with a positive body image, spirituality/religion, and listening to and taking care of the body (Tylka, 2011). In one qualitative exploration, women with positive body image described how they were able to take in positive information and reject negative information (Wood-Barcalow, Tylka, & Augustus-Horvath, 2010). However, information can include societal and media information, not just appearance-related comments directed at an individual. The holistic body image model (see figure 3.1; Wood-Barcalow et al., 2010) may provide a useful framework as it illustrates how multiple sources of body image development (e.g., interpersonal relations and biological/heredity) merge and impact each other. Also, as depicted in the model, the composition of the filter (i.e., positive or negative; rational or irrational; accurate or inaccurate) is shaped by previous information from interpersonal sources that is processed through the filter structure (Wood-Barcalow et al., 2010). Thus, the filter can both protect against negative effects as well as promote positive effects when positive information is allowed in and negative information is rejected or reframed (Wood-Barcalow et al., 2010). What is unknown is whether this filter structure operates this way as a function of physical body size or other influential sources.

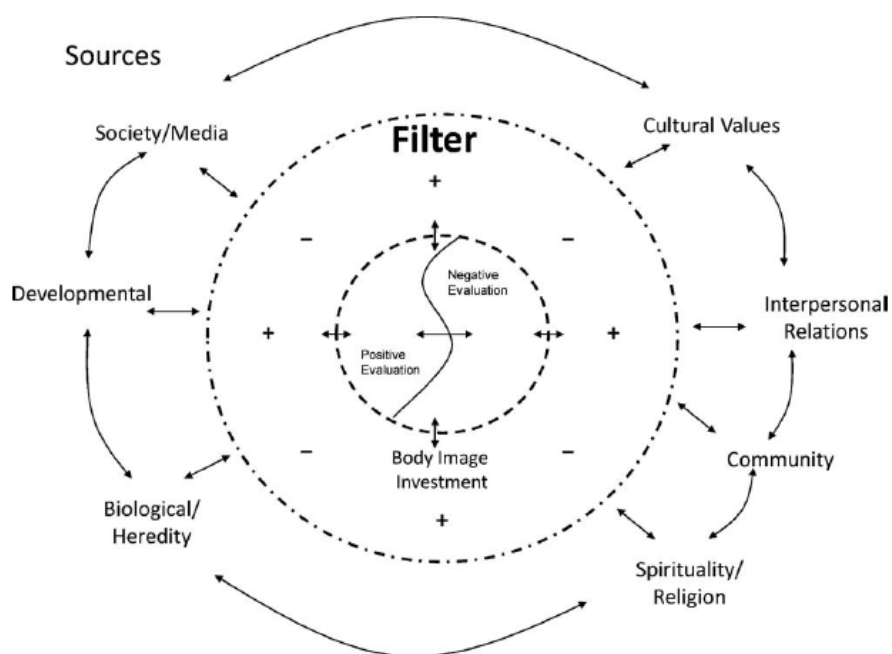


Figure 3.1. Holistic body image model created by Wood-Barcalow et al., (2010) to represent an all-inclusive approach to body image development. Permission from publisher for reuse in a thesis/dissertation from Elsevier, license #4095461390601.

The holistic body image model (Wood-Barcalow et al., 2010) also illustrates the process of reciprocity. Reciprocity is represented by the double-sided arrows located between the outer layer including the body image sources and the inner filter structure. Thus, sources of body image development (e.g., biological/hereditary factors, interpersonal relations) influence the filter structure, however, the composition of the filter (i.e., negatively or positively-framed) can also reciprocally affect how one interacts with the sources of body image development.

In a weight loss obsessed culture, it becomes important to understand how one's body image experiences with appearance-related commentary change (or do not change) as a result of changes to body weight. For some individuals, appearance-related comments may motivate them to engage in weight loss behaviours, regardless of whether

the comments are negative or positive (Herbozo & Thompson, 2006b). Further, an appearance-related comment, even when intended to be helpful and show concern for an individual's health or acknowledgment of successful weight loss, may do more harm than good. Thus far, most research has assessed body image as “snapshots” at a specific weight status, but little research has explored how body image experiences evolve within the *same* individual along with changes to weight status (e.g., losing weight, regaining weight). In addition, studying how women filter and respond to appearance-related commentary with changes to weight becomes increasingly important to promote positive physical and psychological outcomes.

Purpose

The purpose of the proposed study was to better understand the phenomenon of women's lived body image experiences with appearance-related commentary surrounding weight loss.

Methodology

An interpretative phenomenological analysis approach was used in the present study. The intent of this methodology is “to investigate how individuals make sense of their experiences” (Pietkiewicz & Smith, 2014, p. 8). Interpretative phenomenological analysis attempts to gain a better understanding of how participants perceive the world and experience the phenomenon from their own unique perspective (Willig, 2001). Interpretative phenomenological analysis was the best approach to answer the intended purpose of the present study. Interpretative phenomenological analysis is more suitable than other qualitative approaches to understand and interpret personal experiences (such as how appearance commentary impacted women during their own weight loss journey)

rather than systematic, social processes, which is often more of a focus when constructing theory using grounded theory approach (Brocki & Wearden, 2006). In addition, interpretative phenomenological analysis is different from thematic analysis as it offers more opportunity to explore the implications of the meaning-making and highlights the complex decision-making of the participants, rather than simply providing a description (Brocki & Wearden, 2006). There is a dual interpretation within interpretative phenomenological analysis, as first, the participant actively engages in meaning-making while describing her own experience to the interviewer and second, while the researcher also tries to make sense of the participants' interpretations within the analysis (Smith & Osborn, 2008). Therefore, interpretative phenomenological analysis was used in the present study to provide rich, detailed description of participants' interpretations of her own experiences (Pietkiewicz & Smith, 2014). The idiographic nature of interpretative phenomenological analysis allows researchers to explore individual narratives (i.e., participants' unique perspectives) within the overall analysis by showing similarities and differences among the group themes (Pietkiewicz & Smith, 2014). Given the overarching topic of body-related experiences, more specifically body image, embodiment experiences remained at the core of interpretation, for example, how women in the present study experienced and made sense of the world through their body. Smith and Osborn (2008) advocate for the use of interpretative phenomenological analysis within health psychology research, especially for novel research questions within the field, as the dual interpretation (i.e., the participant and the researcher) creates a richer and more comprehensive analysis of the phenomenon.

Participants

Participants were five young adult women who had all gone through or were currently going through a weight loss attempt. For interpretative phenomenological analysis, sample sizes are typically small to enable a rich, detailed exploration focused on depth rather than breadth of an experience (Pietkiewicz & Smith, 2014). Sample sizes can range from one to fifteen participants. However, most studies typically sample about four to seven participants (Borkoles, Nicholls, Bell, Butterly, & Polman, 2008; Fox & Diab, 2015; Jensen et al., 2014; Riggs & Coyle, 2002). Participants are typically selected via purposive sampling in interpretative phenomenological analysis, “to illuminate a particular research question” (Brocki & Wearden, 2006, p. 95). For the current study, inclusion criteria included: women who had been overweight at some point in their lifetime for at least 6 months; were at least 1-year post pregnancy; and had experienced a reduction in body weight through a deliberate decision to lose weight. Women were eligible regardless of the amount of weight lost, when weight loss occurred, the method of weight loss (commercial diet program, lifestyle alterations through diet and exercise, surgical procedure), and whether weight reduction had been maintained (i.e., weight regain since attempt was acceptable). Exclusion criteria included: women who had a history of an eating disorder, had lost weight as a result of illness or medication side effects, those who had not made a conscious decision to reduce body weight or women who had lost weight for athletic performance reasons (e.g., wrestlers). Only one participant was excluded for not meeting the eligibility criteria based on misinterpretation of the eligibility requirements (i.e., was interested in attaining advice on how to lose weight in the future). Participants were recruited through poster advertisements displayed

in local commercial diet program centres, local gym facilities, community recreation centres, and at the university.

Methods

Two semi-structured interviews were conducted with each participant. With interpretative phenomenological analysis, one-on-one interviews are typically used as they “allow the researcher and the participant to engage in a dialogue in real time” (Pietkiewicz & Smith, 2014, p. 10). An interview guide (see Appendix study 2 materials) was prepared which focused on appearance-related commentary, both positive (i.e., compliments) and negative (i.e., criticisms), that participants had experienced surrounding their weight loss attempt. Interview questions included inquiries about the source of appearance-related commentary, the environmental context of appearance-related commentary, the participants' acute reaction to receiving appearance-related commentary, and the extent to which appearance-related comments affected day-to-day cognitions, emotions and/or behaviours. The question format of *before* and *after* their weight loss experiences was based on previous work by Jensen and colleagues (2014) which explored women's experiences with bariatric weight loss surgery. The interview questions pertaining to appearance-related commentary were intended to uncover the details underlying the context of those comments that the VCOPAS (Herbozo & Thompson, 2006a, b) cannot capture in a quantitative measurement scale. For example, does it matter *who* frequent comments are from; who *overhears* comments directed at the individual; the perceived *intent* behind comments; how they typically *respond* to comments?

Procedures

University research ethics clearance was obtained prior to any participant recruitment. Interested participants were asked to contact the research team to set up a convenient time to participate in the study. First, participants were contacted by phone to complete a brief screening interview to ensure eligibility criteria were met. Participants were provided with the choice of interview location, including a private interview room located on a university campus or in the participant's home. These two settings were chosen to ensure participant privacy was maintained and to provide them with a quiet, distraction-free setting. Upon arrival at the scheduled appointment, the participant provided informed consent prior to starting the interview. Participants then completed a brief demographic information questionnaire. Next, participants completed the first interview that was audio-recorded for transcription purposes. Within one week of the interview, each participant was provided with a member check interview summary where the participant had the opportunity to correct or add any context that was missed by the researcher. Member checking was used to establish credibility (Lincoln & Guba, 1985) within the research process. About one to two weeks after the first interview, participants completed a follow-up interview, again in the location of their choice, where conversation topics from the first interview were followed-up on and additional content was explored to gain a deeper understanding of the phenomenon. Once more, a member check summary was provided after the second interview to ensure authenticity of the data. At that point, participants were fully debriefed on the purpose of the study. Data was collected cumulatively not sequentially, as participants were at different stages of participation within the data collection period.

Data Analysis

As human experience is founded on perception (Merleau-Ponty, 1962), interpretation of participants' described experiences with the phenomenon were made in an attempt to provide meaning. The researchers acknowledge Merleau-Ponty's (1962; 1964) mindset that one cannot separate the mind and body, as we perceive, experience, and interact with people and things in our environment. Interpretation of the meaning women apply to appearance-related commentary surrounding their weight loss encounters offered insight into the shared experience with that phenomenon, while maintaining their unique, individual experiences. As mentioned previously, with interpretative phenomenological analysis there is a double hermeneutic, as researchers are interpreting the participants' interpretations of their lived experience with a phenomenon within the analysis process (Smith & Osborn, 2008). Within the present study, dual interpretation took place in three forms: 1) within interview discussions where the interviewer provided interpretation of participants' accounts while asking follow-up questions; 2) within member check summaries where the interviewer provided interpretations of themes discussed and asked for participants to confirm or correct; and 3) within analysis where the researcher (who was also the interviewer) engaged in meaning-making through the stages of interpretative phenomenological analysis. An example of how dual interpretation happened within interview discussions has been included below:

Marsha - I don't regret any of the decisions I made, I learned a lot from it, it's such a crazy journey to do like just everything, like emotionally and socially and obviously physically but like everything, you learn so much about yourself like I think it's really important.

Interviewer – and do you probably feel like you are better person for it? Almost?

Marsha – I don't really think I'm a better person for it, I just think that I'm a more informed person for it like I don't, I don't have this feeling like I lost weight, I'm doing so good, I have this feeling like, I've learned something and I need to pass

that on. Which is also why I signed up for this study [laughter] so you know what I mean, like I don't, umm I don't have a feeling of like I'm better than, but I have a feeling of like I've learned all this stuff and I need to teach other people.

Within our interview discussion, Marsha is making sense of her experiences while recounting them, the interviewer then attempts to interpret what she is saying in further probing questions, which then prompts Marsha to continue her sense-making and offers greater explanation of her experiences to provide a deeper understanding of her perspective. The stages of analysis took place over four stages (Pietkiewicz & Smith, 2014; Smith, Flowers, & Osborn, 1997; Willig, 2013). First, audio-recordings were transcribed verbatim. In the first stage, each participants' interview transcript was read over thoroughly whereby the first author made notes in the left margin reflecting any initial thoughts or observations about the text (e.g., associations, questions, comments on language used). The second stage consisted of creating themes to categorize sections of the text within the right margin of each transcript. The third stage attempted to provide structure to the analysis and broad themes from the second stage were combined to form clusters of themes that had shared meanings. These clusters were then given over-arching labels to describe the smaller themes within. The fourth stage included creating a summary table of all the structured themes and quotations from participants that represented those themes. At this point, the author decided which structured themes were retained and which were disregarded in relation to the phenomenon under investigation. These analysis stages were repeated for each participant's transcript until a master summary of themes was complete. It is important to note that all categories and theme titles were inductively created based on participant data. However, Smith (1997) states that interpretative phenomenological analysis cannot be entirely inductive, as researchers often consult previous literature prior to conducting a study and instead should remain

reflexive about how that may influence interpretation. To establish trustworthiness, a second coder analyzed transcripts for two of the five participants and met with the author to compare themes and narrow down broad themes into structured themes. The analysis was primarily oriented within the author's constructivist paradigm, acknowledging the concept of multiple realities, collective reconstructions of knowledge joining to form some consensus, with researcher and participant values present and informing the data (Guba & Lincoln, 2005). Within the results, the participant's own words are displayed as direct quotations as often as possible to maintain authenticity with the data (Lincoln & Guba, 1985).

Results

Participant characteristics can be seen in Table 3.1. Pseudonyms have been used for all participants. Overall, three of the participants described being overweight during late childhood, three during adolescence and all five of them had been or were currently overweight as young adults. When asked what contributed to their weight gain, reasons included poor eating habits, stress, inactivity, lack of motivation to engage in healthy behaviours, and for one woman, hypothyroidism which affected her metabolism. Their weight loss strategies included modifying lifestyle behaviours, such as improving eating habits and engaging in more frequent physical activity. For two women, participating in calorie restriction programs (i.e., Weight Watchers®) was also used to lose weight in their past. At the time of the interview, two women self-described themselves as healthy weight, one as "mildly overweight", one as overweight and another woman described herself as obese. It is worth noting that all women described their weight status in reference to a body mass index score. This highlights the pervasiveness within Western

culture of how weight is defined in terms of the standard (i.e., body mass index calculations) with which weight is measured in relation to others.

Table 3.1

Participant Characteristics.

	Age (years)	Race	Occupation	Length of interview 1 (minutes)	Length of interview 2 (minutes)	Current self-reported weight status
Diane	26	Asian- Indian	Student	48.02	63.48	“healthy BMI”
Jessica	30	Caucasian	Research Coordinator	49.07	55.03	“overweight”
Kathy	29	Caucasian	Research Assistant	39.22	48.24	“obese BMI”
Marsha	25	Caucasian	Student	100.47	70.04	“mildly overweight”
Allison	26	Caucasian	Student	54.28	36.57	“healthy weight”

The results have been organized in a *before* and *after* structure in reference to weight loss in order to simplify the context in which body image experiences with appearance-related commentary were discussed (i.e., at higher and lower body weights). However, it should be noted that the author does not intend to insinuate appearance-related commentary experiences, in relation to weight, are a dichotomous experience. These women’s experiences have been, and will remain, a recurrent and dynamic process. For example, as Jessica, who described herself as overweight at the time of the interview, stated, “I don’t think my body right now is a before picture.” First, the women’s general body image is presented, in order to set the interpretative context that may have shaped

their experiences with appearance-related commentary. Next, women's body image experiences with appearance-related commentary while at a *higher* weight are depicted and followed by their experiences when they were *lower* weight. Lastly, lessons learned from the women pertaining to body image, weight loss and appearance-related commentary are discussed.

Body image experiences

Theme 1: Weight preoccupation. Four of the five women demonstrated a preoccupation with their weight in discussions related to their pursuit of weight loss. For Kathy and Marsha, weight preoccupation was more deeply rooted from an early age but for Diane and Allison, thoughts about their weight started to occur in late adolescence and young adulthood. As Marsha explained, "I remember distinctly being in grade 4 and crying and crying all the time because I didn't look like everybody else...one day I said to my Mom, like, I'm not happy, I don't like being fat." She went on to talk about her fixation with trying to be slimmer like her brother, trying to mimic what he ate and did in order to be thinner like him. Kathy, who also talked about being overweight during her childhood said, "I've sort of spent a lot of time, I'd say, sort of dwelling on it [her weight] in everyday life um probably more than I should be." Given how closely linked weight and self-worth were for these women in our discussions, it was not surprising how preoccupied they were with their weight. Kathy herself was quick to point out this association, as she stated, "I think a lot of it [her body image thoughts] is centered on my weight and I guess because I put so much importance on my weight." Conversely, this is where Jessica differed from the other four women, as she spoke about placing less value on weight and instead felt health, strength and living an overall healthy lifestyle were

more important than being thin. She explained, “I don’t want to put too much value on that [weight and physical appearance] because when it comes to someone, that’s not what I value.” Jessica’s emphasis on physical ability is likely a function of her surroundings while growing up as she lived in the country, on a farm, where she witnessed her parents doing lots of physical work and she herself was expected to be actively involved. When the interviewer asked what contributed to her positive approach, Jessica reflected on this notion and acknowledged her parents’ influence was likely where she inherited, “that idea of capability vs size.”

Theme 2: Negative body image hinders behaviours. Three of the women were aware of how much their negative body image affected their daily lives. Both Marsha and Kathy explained that they “hated” being overweight for most of their lifetime and how it affected every avenue of their life. Kathy discussed how she attributed her unhappiness to her weight and felt, “it [her negative body image] sort of prevents me from really, I think, seizing opportunities to the best of my ability ‘cause it’s always sort of holding me back.” Diane also commented on how she felt unable to fully engage in social activities because of her negative body image. “I wasn’t able to enjoy what was happening or who I was with or the purpose of where I was um because deep down, I was not comfortable with who I was.” Marsha talked about the cyclical nature of her negative body image and behaviour outcomes. “It was just this cycle of like negative things and then I just felt even worse about myself and I think it just contributed to the whole gaining weight thing.” The frustration these women felt with their weight was apparent in our discussions. Although their weight was initially blamed for holding them back, it appeared upon further reflection when prompted during the interview that their negative body image was more

debilitating than the weight itself. For example, Kathy revealed, “it stems from my own negativity and my own self like criticisms cause like no one else thinks like, ‘oh you know, that person is so fat!’ Or you know, but no, it’s just something, something in my brain.”

Theme 3: Realistic approach to body image. Two of the women, who possessed several positive body image characteristics, talked about how their body acceptance and realistic approach to weight had helped to influence their daily activities. Allison discussed how she really strives to be in-tune with her body, stating, “Your body will tell you what it needs.” She also talked about her ability to distinguish between health and thinness and that, “skinny isn’t something that necessarily is a positive thing.” Jessica exuded body acceptance in her discussions surrounding weight and body image, as she explained, “I’m fine the way I am.” Much of Jessica’s body acceptance stems from her investment in physical function and ability, not physical appearance. “I think I have a good sense of myself and what I can do and what I can’t do, what’s realistic and what’s not.” Jessica also talked her ability to accept her body shape from a young age, stating, “I probably weighed 25-30lbs more than them [other girls at school]. And I was just always sort of like, I have big dense bones, I have lots of muscle”. Overall, Allison and Jessica seemed to have developed a holistic and self-compassionate approach to health and physical appearance. It was interesting that at the time of the interview, Allison self-described her weight as “healthy weight” and Jessica described herself as “overweight” but they both projected several characteristics of positive body image, illustrating that body size does not determine body image.

Appearance-related commentary while at a *higher* weight

Theme 4: Negatively-primed filter facilitates negative effect. All five women spoke to how their weight insecurities and negative body image affected how they interpreted negative appearance-related information. Diane explained, “You know when you are in a stage where you are very critical of your own self and then someone else says something that makes it worse!” Diane explained that, “negative comments, they tend to be very direct”, where she referred to a specific incident where her parents’ neighbour told her mother ‘watch out what you feed her’ right in front of my face...and then he said ‘maybe if you don't feed her for a few days it would help.’ Jessica had a similar experience, stating, “I think you get to a point where you, where you don’t feel good [about your body] and then I think you are hyper-sensitive and I’d say that probably affects things.” Jessica said someone had told her once, ‘we don't have anything in your size in this store’. Negative weight comments were very salient for these women when they were higher weight. Allison commented, “I was uncomfortable with my weight so it would just like, okay well anything that feeds that [negative body image] come on in, and anything that doesn’t agree with that, kind of gets brushed off.” The way Allison worded her comment made it seem like she *welcomed* any negative appearance-related comments because they matched up with her existing body image. This may be why she was so resistant to appearance compliments, they were *unwelcome* during that time. Marsha spoke to the reciprocal nature of this relationship as she explained, “The thing is with negative comments is that they just help you be in a negative place and it’s so hard to pull yourself out of that bad body image, especially when you get negative comments...they fan the flame.” Diane also talked about how her negative mindset with regards to her

body image made her even interpret “ambiguous” comments to be negative, thinking people were “hinting” at her weight. Kathy shared a similar experience with getting “off-hand comments” about her eating behaviours, for example “oh are you going to eat that?” On the surface, some individuals may not view this as a negative comment but her negative body image affected her interpretation. When discussing who the source of negative comments was, Kathy explained how negative comments coming from friends and family “would be a lot harsher” and hurt her feelings more so than from strangers. All-together, it was noticeable how “primed” all five women were to interpret *any* type of commentary in a negative way when focused on their weight insecurities and negative body image.

Theme 5: Negatively-primed filter inhibits positive effect. Unanimously, all five women recalled their “disbelief” in any positive appearance-related attention they received from others while they were higher weight and possessed a more negative body image. Marsha spoke about receiving positive comments from her boyfriend, “he would always tell me how good I looked and how pretty I was and at no point in time did he ever mention I was pretty *because* of my weight or I was good looking *because* of my weight. Like he always thought I was beautiful because of who I was.” However, Marsha described her mindset, stating, “Even if there was positive comments, like when I was in a bad place, it would be like, meh, you’re not right, it doesn’t mean anything.” Jessica and Diane believed that people were, “just trying to be nice” or “polite.” Jessica provided some examples of positive appearance-related comments she has received, “I like your outfit or I like your hair, that’s lovely earrings, rather than like you look thinner.” Thus, comments tended to be focused on general appearance rather than weight and shape.

Kathy said, “There is always something in the back of your mind during those times [when you are heavier] being like, ya right, you don’t look as good as she [person providing comment] thinks you do.” Kathy and Marsha who self-described themselves as being overweight as children through to young adulthood seemed to especially struggle with being able to accept positive appearance-related commentary. Perhaps their negative body image was more deeply-rooted than the other women who did not have as long a history of being a higher weight. Overall, all five women experienced a shared reluctance to accept positive appearance-related commentary, as it was deemed irrelevant and insincere to them during this time.

Theme 6: Desire for appearance-related commentary. Unexpectedly, the *absence* of appearance-related commentary, both positive and negative, was discussed by two women. For Kathy, she talked about how during her adolescence and young adult years, the lack of attention she received from men contributed to her low self-esteem. “When I was dating or trying to find a boyfriend kind of thing when I was younger...I would see a lot of my girlfriends who weren’t as overweight as me get a lot of male attention, get asked out a lot and I didn’t.” Marsha surprisingly talked about how the absence of *negative* appearance-related information when she was at a higher weight affected her body image. “Every time I was in a bad place and when people didn’t make comments, it just like fueled that idea that I was alone because, look, nobody cares enough to say anything.” Marsha explained that she was convinced people were thinking negative thoughts about her weight or appearance but just did not want to say anything to her face. Again, Kathy and Marsha’s weight history, being a higher weight for a longer

duration of their life, may explain their longing for appearance-related comments as a form of acknowledgement when they have felt unnoticed for most of their life.

Body image and appearance-related commentary while at a *lower* weight

Theme 7: Initial rejection of positive comments. Four of the women talked about being unwilling to accept appearance compliments at first after experiencing some weight loss. Diane explained that her hesitancy stemmed from the novelty of these comments. Kathy attributed her reluctance to a societal standard, remarking, “I feel, like, just in general, women aren’t really supposed to accept compliments about themselves ‘cause it’s kind of not polite or whatever stupid crap haha.” Kathy’s comment reflects a societal pressure she, and likely other women, feel whereby the norm is to reject compliments as to not appear arrogant or vain. Another factor that seemed to affect how they received positive appearance-related comments was their prior negative body image perceptions. Marsha admitted that even when she was thinner, “sometimes I still feel like that girl that was 50 lbs heavier.” Allison shared the same sentiments as Marsha, as she also talked about how, “weight loss doesn’t necessarily make you happy. So you could still lose a lot of weight and still be really uncomfortable with who you are.” Therefore, it appears that weight loss did not immediately alter how positive appearance-related information was processed. The interviewer noticed during discussions that there was a sense of disappointment, especially for those women who had believed their higher weight had been holding them back, that becoming a lower weight did not produce the desired improvements to body image and responding to appearance compliments.

Theme 8: External validation from others. For two of the women, Diane and Kathy, positive appearance-related commentary acted as an endorsement for their weight

loss efforts. Specifically, for Diane, she referred to appearance compliments as a “reward”, as she interpreted positive feedback as an acknowledgement of the effort she had put into becoming thinner and motivated her to continue her weight loss efforts. Kathy shared a similar mentality to Diane also talking about the importance she placed on her weight, “I preoccupy so much on my weight um rather than my other like appearances so I think I’d put more stock into those [positive comments about her weight loss] when I get them.” When talking about the source of commentary, Kathy expressed how “I think it’s almost better to get them [appearance compliments] from my female friends and family members...I think that with the girls, I’m trying to impress other girls sometimes um which is silly but it’s true.” Kathy, herself, recognized her desire for external validation was likely from her fixation on her higher weight. Both Diane and Kathy expressed having low self-worth or self-esteem. Thus, appearance compliments were likely acting as overall validation, not just solely about physical appearance. However, it is important to note that both women recognized the potential risk of relying on external validation and discussed trying new strategies to become less reliant on external validation.

Theme 9: Self-acceptance. All five women discussed how accepting their body, regardless of whether they were higher or lower weight, allowed them to accept positive appearance-related information. Marsha described receiving positive appearance-related comments from her boyfriend while losing weight and said, “I don’t think it [positive comments] helped me feel better about myself, I think I only started to accept what he was saying once I did feel better about myself.” Kathy explained her shift in mindset to more readily accept compliments, stating,

I think it was like I was starting to feel better about my body already and see myself and feel like I was losing weight and feel I had more energy and stuff and then to hear that come back to me also from strangers or my friends and family that kind of thing, like that also sort of played into it.

Although this was a positive shift in Kathy's mindset from previous *reliance* on external feedback to feel good about herself, it seemed that these comments were still acting as some form of validation. As appearance compliments were now desired to endorse her *own* positive self-perceptions. Diane described a similar realization that started with accepting her body, "I think that once *you're* happy with yourself, you can respond to somebody else." Jessica, who already had a strong sense of body acceptance, talked about being cautious of positive feedback from people she did not know as well when she was losing weight, as she questioned their intent, saying, "There are definitely people who are interested in reinforcing what they think is positive behaviour [with regards to exercise and eating]." She expanded upon this explaining how she valued comments from close friends and family more so than strangers as she trusted their intentions, "if it was a close girlfriend and they were like, 'you look like you are slimming down,' like that intention is much different than like random person at the gym." Jessica's ability to critically evaluate appearance compliments, rather than accept them at face value, demonstrates how her body acceptance provides her with a strong foundation in which she is better able to process appearance-related information. Similarly, Allison also talked about being mindful of *who* was providing appearance-related commentary, especially negative comments, saying, "I don't think it has anything to do with you at all, it more has to do with them. They have some issues that they need to work out."

Moving forward from lessons learned

Although body image experiences with appearance-related commentary have been presented, for comprehension, as separate from one another while a *higher* and *lower* weight, it is important to recognize these experiences carry over and intersect with one another. The following section embodies the participants' collective experiences, regardless of whether they are currently *higher* or *lower* weight than previously, and depicts their mindset moving forward.

Theme 10: Body image fluidity. All five women discussed a fluidity to their body image, talking about having good and bad days as far as thoughts and feelings directed towards their body. For the two women who seemed to have more positive body image characteristics, there was tension for them when they experienced negative moments. Allison shared how she tries to remind herself of her positive qualities when having a bad body image day, “There are some days when I’m like okay, I don’t like this [her body]...but I try to be like, no, right now I’m healthy, I’m feeling good.” Jessica shared a story describing a bad body image day for her, where she had referred to her body looking like a sausage in a dress, explaining, “That’s rare, that’s a really bad day when I get to the sausage casing moments [laughter].” For these women, although they did not like having those negative body image moments, they managed this tension realistically, recognizing the normalcy of a balance between good and bad days.

Theme 11: Active role. Three of the women exhibited a conscious effort to become more body positive. When talking about being mindful and engaging in healthy behaviours, such as exercise, Jessica explained, “I think making the space, making the time, um finding the money for it [her physical activities], deliberately recruiting friends

that are very supportive of these activities.” Marsha tried to make sense of her journey and where she is at now, explaining, “I just feel like everything is, not falling into place because I worked really hard at it...I have worked at being in a good place.” For Allison and Jessica especially, both women talked about actively choosing what their priorities were in life. Allison explained that, “There are some things that I am not willing to give up [in her life] as well, maybe they [other women] are willing to give up, maybe 5 hours a week [to work on their appearance] ...I’m not going to give up my life to be thinner.” Jessica shared a similar attitude as she reflected on her priorities, stating:

I think about it sometimes and what it would probably take me to get to that ‘goal’ weight or whatever, and it’s like, you know what? I don’t like that person because that person has to NOT do volunteer work, or committees [at work] or doesn’t get to walk her dogs because she needs to be running [to burn more calories] and doesn’t get to go to restaurants and have meals with her husband because you are eating nothing but chicken breast today, and I don’t like that person, so there is sort of an acceptance that, like, I don’t want to be that.

This lesson seemed to coincide with maturity and learning from previous life experience. These women seemed fed up with weight loss efforts they had used in the past and had made a mindful decision to allocate their efforts into other avenues of their life they now valued more than striving to attain a lower body weight.

Theme 12: Becoming an advocate to educate others. Jessica and Marsha both discussed this sense of responsibility to help others based on their body image experiences. Jessica explained she has a better sense now of, “What weight loss looks like in my body and what is reasonable,” and reminds herself that being a higher weight,

“Is one part of your person.” Thus, she feels equipped to be an ambassador for others through her actions and leads by example as someone living in a higher weight body. Jessica described how people are sometimes surprised by her active lifestyle, remarking, “I think that there’s a lot of people who have very old ideas of what it means to be overweight.” Marsha explained, “I have this feeling, like, I’ve learned something and I need to pass that on.” She admitted that putting herself in such a vulnerable position, as an advocate, makes her a bit uncomfortable but she still feels a need to help. For these two women, helping other women construct a more positive body image was an essential component to their own journey.

Discussion

From conversations with these five women, it was evident that body image experiences evolve through a reciprocal process, as the environment influences the individual and the individual chooses how they interact with their surroundings, which could include interpersonal relations, media information, culture or society. However, it is not just the physical body that shapes body image, it appears the mindset plays a powerful role in constructing interpretations of daily interactions within the environment. The purpose of this study was to better understand the lived body image experiences women had with appearance-related commentary surrounding weight loss. Women discussed appearance-related commentary they received while at a higher and lower weight and how their approach to these comments differed based on certain contextual factors.

Consistent with previous literature (Herbozo et al., 2013), negative appearance-related commentary was associated with a negative body image experience, often

resulting in negative thoughts, emotions and behaviours for the women in the present study. However, the more in-depth exploration into this phenomenon within the current study allowed us greater insight into the possible mechanisms behind this negative effect. As the women explained, while they were higher weight, their negative body image framed any encounter with appearance-related commentary and created a cyclical effect. All negative comments were internalized, and some of the women admitted to seeking out negative information as it was salient information at the time. Their strong weight preoccupation (i.e., investment in weight) allowed negative appearance-related comments to saturate their core body image, which only perpetuated negative thoughts.

As Wood-Barcalow and colleagues (2010) depicted in their holistic body image model, body investment is fluid and can either expand or contract depending on what information is filtered in. Therefore, the women in the current study discussed how negative appearance-related comments were *allowed* in when they possessed a more negative body image, which likely expanded their investment in body weight, resulting in a negative cyclical process. Previous studies have suggested that individuals who are overweight or obese may have poor body image from the stigmatization they receive and not simply because of their larger body weight (Latner & Wilson, 2011; Puhl & Latner, 2007). However, it may be a combination of typically experiencing more frequent stigma through verbal remarks as a result of their larger body weight (Puhl & Heuer, 2010; Puhl, Moss-Racusin, Schwartz, Brownell, 2008) and a heightened sensitivity to negative appearance-related information, for those individuals who have a greater body image investment in weight (Wood-Barcalow et al., 2010). As Diane indicated when looking back retrospectively, even comments that were not directly negative towards her weight

(i.e., ambiguous) were interpreted negatively while she operated under negative body image. As one study found, an individual's BMI alone was not related to the frequency at which they experienced incidents of stigma within their daily lives (Vartanian, Pinkus, Smyth, 2014). Thus, it may not be the mere frequency with which individuals who are higher weight are exposed to negative appearance-related commentary, but the significance placed on weight information and the attention paid towards those comments that results in a more negative body image.

As mentioned previously, within the limited research on positive appearance-related commentary and body image, appearance compliments do not always produce positive outcomes (Calogero et al., 2009; Herbozo & Thompson, 2006a, b). The results from the present study are consistent with this previous work as positive appearance-related comments were not always received well by these women. Experiences with positive appearance-related commentary not only differed across the five women but even varied *within* the same woman, as their own physical body and mindset changed over time. For example, Diane and Kathy spoke about being more receptive to positive appearance-related comments while at a lower weight compared to when they were higher weight as they considered the compliments as recognition for their weight loss efforts. In contrast, Marsha was much more adamant about how it was a positive shift in her mindset, not losing weight, which shaped her interpretations of positive appearance-related commentary. Therefore, this qualitative exploration demonstrated there is much more to the story than simply just the appearance compliments themselves.

As Wood-Barcalow and colleagues (2010) outlined in their holistic body image model, one's information filter can be molded by what information is processed and can

ultimately adjust the composition of the filter. This was very evident with the positive appearance-related commentary experiences in the current study. The women all spoke to dismissing positive information while they were higher weight and predominantly had negative body image. This rejection of appearance compliments even continued to be their approach even after initially losing some weight, as negative body image thoughts and feelings lingered. It was not until these women actively worked to reframe their mindset to think more positively about their body that they were able to accept appearance compliments as *accurate* information. This was similar to one study in which overweight women who had undergone bariatric surgery were asked about their experiences pre- and post-surgery (Jensen et al., 2014). Several of the women talked about having to learn new processes and had to fight old habits and thoughts when it came to weight and eating behaviours (Jensen et al., 2014).

To the disappointment of some of the women in this study, weight loss did not automatically alter the way body information was filtered, at least not to the desired extent. Several of the women self-reflecting on this notion and realized it was not until they embraced more positive body image characteristics, such as body acceptance and rejecting unrealistic standards that encounters with positive appearance-related information could even be experienced in an adaptive way. This was consistent with Wood-Barcalow and colleagues (2010), who found young women remarked how a cognitive shift helped to facilitate their transition to a more favourable body image (i.e., more positive body image characteristics). For some of the women in the current study who placed a great deal of importance on weight, positive appearance-related commentary did initially act as positive reinforcement to reward their weight loss and

motivated further weight management efforts (i.e., restrictive eating, exercise). However, those two women were aware this was not ideal and identified the potential harm of relying on external validation. Although there were recent efforts to create more internally driven self-worth, there was still an underlying desire for validation from others.

In general, body image improvements have been shown to occur, even with modest amounts of weight loss (Sarwer et al., 2011), however, some of the improvement does regress with weight regain. This was consistent with the current study as the women talked about how periods of weight regain were often accompanied by reappearing negative body image. Perceived physical changes to body composition have been found to predict greater body image improvements compared to actual physical changes (Martin Ginis, McEwan, Josse, & Phillips, 2012). Cognitive behavioural therapy approaches to body image improvement, without an emphasis on weight loss, have also been successful in improving body image (Bacon et al., 2002; Rosen, Orosan, & Reiter, 1995; Strachan & Cash, 2002). In the present study, being a higher weight did not prevent Jessica from displaying body positivity, acceptance or valuing physical ability. Her positive body image helped Jessica process body-related information in a protective way. She explained how she interpreted appearance compliments as a compliment to her whole person (e.g., her overall well-being) and critically evaluated that person's intent behind their comment rather than simply accepting it at face value. Thus, developing positive body image was not dependent on weight loss or being a lower weight. For two women, mentoring other women about developing body acceptance was an important part of their own positive body image development (Tylka, 2011).

Several of the women talked about ‘catching’ themselves in previous, negatively-framed thoughts about their body image. Research suggests that for some individuals, even if weight loss occurs there is the potential for negative body image thoughts to linger and not necessarily dissipate with weight loss, which is known as ‘phantom fat’ (Annis, Cash, & Hrabosky, 2004). For the women whose body image was deeply connected to weight, they had difficulty accepting positive appearance-related commentary, even after weight loss, as their former negative body image was still the dominant filter through which they processed body-related information. Therefore, it appears that body image may be less dependent on the physical body and may have stronger cognitive associations (Schwartz & Brownell, 2004), for some of the women.

Implications

With regards to positive appearance-related commentary specifically, the current study offers some encouraging implications for body image research. First, up to this point, most research has primarily focused on whether positive appearance-related comments could reduce negative body image rather than facilitate positive body image. Additionally, appearance compliments received in present day cannot “cancel out” harmful effects felt from negative body image experiences in one’s past (McLaren et al., 2004). Therefore, the current study provides a deeper understanding of this phenomenon, as the subsequent effect appears to be less about the comment itself and more about the cognitive context in which the comment was received and interpreted. In addition, positive appearance-related comments should not be relied on to *produce* positive body image, but rather maintain existing positive thoughts and emotions. Holding favourable opinions of the body is one of the qualities that makes up positive body image (Avalos et

al., 2005). As the women in the present study indicated, their body image in the moment they received an appearance compliment was the lens through which that comment was interpreted. For example, when in a negative body image state of mind, the appearance compliment was likely dismissed as inaccurate information. However, when in a positive body image mindset, positive appearance-related information was considered more accurate and was accepted.

From a practical standpoint, based on the current findings it may be beneficial for body image intervention programs to focus on developing positive body image characteristics, such as body acceptance and appreciation rather than focusing on weight loss. It appears that body acceptance was the origin for positive adjustment, regardless of body weight. Positive body image has been associated with more health-promoting behaviours versus health-compromising behaviours (Andrew, Tiggemann, & Clark, 2014). Thus, educating young women on how to build body acceptance may provide the necessary foundation when learning how to process appearance-related information. It is important to distinguish that *accepting* positive appearance-related commentary is not the same as *relying* on external validation. This was best exemplified in Jessica, who explained her acceptance of positive appearance-related commentary (e.g., her husband saying she was beautiful) reflected how she already viewed herself and was interpreted as an overall evaluation of her positive well-being. Similar to the acceptance model of intuitive eating (Avalos & Tylka, 2006), body acceptance from others (which may come in the form of appearance compliments from others) fostered body appreciation which then lead to intuitive eating behaviours. Programs designed to develop positive body image will provide young women with autonomy over information processing, giving

them more control over the effect those comments have on their body image as opposed to passively letting negative effects happen to them.

The current study also offers support for health promotion programs that de-emphasize weight, such as Health at Every Size®. The tenets of the program include encouraging body acceptance, intuitive eating, and active embodiment for enjoyment (Bacon & Aphramor, 2011). The two women in the present study who possessed several positive body image characteristics, including body acceptance, were no longer focused on weight or trying to lose weight. Instead, they had a drive for health, physical ability and a balanced lifestyle that involved making priorities for activities they enjoyed doing and were not fixated on restrictive, weight management rituals.

Future Directions

The present study provided a better understanding of how influential body image is for young adult women when interpreting appearance-related commentary. However, it's unknown whether body image would have the same impact for men when processing appearance-related comments. Future research could interview men about their experiences with appearance-related commentary. Also, future research could explore how weight cycling, not just weight loss, may affect how appearance-related comments are experienced and interpreted. Although briefly discussed in the present study, it would be interesting to explore further how appearance-related commentary affects weight loss pursuits for women (e.g., motivation or deterrent). In addition, to test the effectiveness of programs designed to promote positive body image, future research could investigate whether participants feel they are better able to process appearance-related commentary after receiving the program.

Reflexivity

As a constructivist researcher, I recognize my pre-knowledge and personal experiences with the phenomenon under investigation were a strength to the research design and interpretive phenomenological analysis methodology. As a woman who has her own body image experiences with appearance-related information, as it pertains to weight loss, I recognized this as an asset to the research process. As Daley (2007) accurately points out, "we bring along our bodies, appearance, and a variety of behavioural cues" (p. 190), when we engage with a participant. Thus, as my current physical appearance (i.e., body weight) does not reflect that of an individual with higher weight, I chose to share my own story with participants at the time of recruitment to build rapport with the women. In addition, within the interviews I took on a more empathetic and well-informed approach to my probing questions in my discussions with participants about weight and body image experiences to get a richer description of the phenomenon. For example, one participant shared a story about being so uncomfortable with her weight that she chose to wear a baggy sweatshirt to de-emphasize her bigger shape during the 35-degree Celsius summer weather. As someone who had been higher weight previously, and engaged in similar appearance camouflaging techniques to conceal my body, I was able to listen with a deeper understanding and able to ask follow-up questions in a non-judgmental way. In addition, my personal experiences with the phenomenon aided my ability to interpret information within the data analysis phase as well, as my understanding helped to make connections between themes.

Admittedly, there were moments during a few of the interviews where it was challenging to not interject based on some of my more recent body image experiences, as

I find myself shifting more towards positive body image characteristics. Just as my own values are an essential part of the research process, the participant's values must remain central and as the researcher, I must allow the participant to engage in her own meaning-making during the interview without being led by my values. For example, one participant talked about weighing herself on the scale every day and engaged in restrictive rules with her eating behaviour, which does not align with my Health at Every Size® approach. However, I recognize that everyone's journey is different and I allowed her the space to discuss and interpret her own experiences.

Conclusion

Overall, the current study added valuable insight into body image as the mechanism behind interpreting appearance-related commentary. To date, most of the appearance-related commentary research has examined how comments affect one's negative body image. However, the current study suggests that one's body image may alter the lens through which appearance-related commentary is experienced. This adds support to the holistic body image model proposed by Wood-Barcalow and colleagues (2010), specifically with regards to the appearance information filter and the concept of reciprocity. A heightened sensitivity to negative appearance-related commentary existed when the women described being in a negative body image state, and thus, rejected most positive appearance-related comments. However, what was encouraging was this information-processing filter worked in the other direction as well. Women could accept positive appearance-related comments once they had developed more positive body image characteristics (i.e., body acceptance). Thus, for appearance-related comments to be filtered in (or accepted), appearance-related comments had to accurately match with

how the individual currently viewed themselves (i.e., negatively or positively). To the disappointment of some of the women, weight loss did not directly produce more positive body image. It was only with a purposeful effort to construct more body acceptance and reject unrealistic appearance ideals that the women experienced more overall positive body image. Therefore, positive body image appears to be an essential mechanism that will help women process appearance-related commentary in an adaptive and self-preserving manner, regardless of body size or weight.

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Transition from study 2 to 3

In study 2, the women interviewed described how influential their body image was, at the time of receiving an appearance compliment, in how they processed or interpreted those comments. Appearance-related commentary (either negative or positive) was accepted as accurate information only when it matched with their body image at the time. Interestingly in study 2, women who intentionally shifted their mindset to become more body positive experienced multiple *intrapersonal* benefits for their overall well-being (e.g., body acceptance, rejecting thin ideal, more confidence, less preoccupied with weight). This shift to adopt more positive body image proved to be more effective than their previously intended solution of changing their physical body through weight loss.

Thus, we wanted to expand upon this notion to determine whether there could be *interpersonal* benefits for women who had a positive body image. More specifically, do other people recognize and consider someone having a positive body image as an admirable characteristic? To provide a different perspective, study 3 explored impression formation from the evaluator's perspective, not from the target's perspective. This was done to provide context from an observer's perspective to help inform future implication strategies. For example, if exhibiting a positive body image can make a favourable impression on other people, this could be a potential self-presentational tactic individuals employ to influence social judgments from others.

Chapter 4: Study 3 - Making a good impression:**Overcoming negative social judgments with positive body image**

Introduction

The impressions other people form of an individual can influence how they treat that person (Leary, 1995). As a result, people often attempt to manage the impressions others form of them; this process is referred to as self-presentation (Lindwall & Martin Ginis, 2006). Through self-presentation people try to convey to others that they are a certain kind of person (i.e., possess certain desired characteristics and do not possess undesired ones) in order to maximize social benefits and minimize costs. However, despite people's best efforts to convey desirable aspects of themselves to create a favourable impression, they are not always successful. In North American society, physical appearance (e.g., body weight) is salient information people may use to form their first impressions of others which could lead them to form an inaccurate and/or unfavourable impression of another individual.

Weight bias, the tendency for others to judge an individual negatively or discriminate against them in some form because they are overweight (Puhl & Brownell, 2001), is a pervasive bias that exists within North American society. Weight bias has been identified among health care providers (Schwartz, Chambliss, Brownell, Blair, & Billington, 2003), educators (Neumark-Sztainer, Story, & Harris, 1999) and employers (Roehling, 1999). Weight stigma has been shown to develop as early as pre-school. For example, in one study, children indicated they were less likely to want to play with overweight children (Cramer & Steinwert, 1998). Similarly, children as young as three years old associate the term "overweight" with individuals who are mean, stupid, ugly, unhappy, and lazy (Brylinsky & Moore, 1994). This bias can persist into adulthood as individuals who are described as being overweight are rated more negatively on physical

(e.g., less attractive) and personality (e.g., less social) attributes compared to those described as normal weight or underweight (Martin Ginis & Leary, 2006). Weight bias or stigmatization has been associated with several negative outcomes, including: poor psychological functioning (e.g., depression, anxiety, low self-esteem; Jackson, Grilo, & Masheb, 2000; Puhl & Brownell, 2006); economic disadvantages (e.g., lower pay for equal work; fewer advancement opportunities; Puhl & Heuer, 2009); poor quality health care (e.g., shorter visits with physician; less likely to utilize health care because of stigma from physicians; Puhl & Heuer, 2009); fewer opportunities to adopt children (Puhl & Brownell, 2001); and poor quality interpersonal relationships (e.g., considered less attractive; deemed unsuitable for marriage; Greenleaf, Starks, Gomez, Chambliss, & Martin, 2004; Neumark-Sztainer, Story, & Harris, 1999). Therefore, determining factors that influence social judgments about weight is essential to improve the overall quality of life for individuals who are higher weight.

Weight bias is suggested to exist on the basis that weight is believed to be entirely controllable (Crandall, 1994; Rodin, Price, Sanchez, & McElligot, 1989). Thus, if people are overweight, they are seen as possessing a moral flaw since they are not able to *control* their weight and appear to lack self-discipline (DeJong, 1993). Similar to other forms of prejudice that are not controllable (e.g., racism), weight bias and anti-fat attitudes align with the justification-suppression model (Crandall & Eshleman, 2003). This model theorizes that prejudices, like weight bias, are expressed by people if they believe they have sufficient justification for their views. Therefore, according to this model, it is somehow “acceptable” to exhibit anti-fat attitudes because under this opinion, individuals are believed to be overweight as a direct result of their unhealthy lifestyle choices (e.g.,

poor diet, inactivity). For individuals who hold these views, their weight biases are “just” in their minds as they believe overweight individuals are solely responsible for their situation and deserve what they get for poor lifestyle choices (Hafer & Bègue, 2005). In order to change these harmful and erroneous beliefs, research is needed on factors that influence these negative social judgments and also factors that can positively influence impressions of individuals who are higher weight to ultimately reduce negative social judgments.

In order to make a more favourable impression on others, one approach that higher weight individuals might attempt is through changing the physical body itself, via weight loss. In one study, targets described as heavy and as having lost weight were rated to have positive traits (e.g., motivated, disciplined; Blaine, DiBlasi, & Conner, 2002) and thus, made a favourable impression, compared to thin individuals who had lost weight. In other words, information provided about an individual's recent weight history can influence impression formation. Descriptions that provide a directional component to weight (i.e., weight trajectory) rather than a simple, static measure of body weight (i.e., body mass index) provide more detailed context to inform one's impression. However, it appears to be more complex as the *method* of weight loss plays an important part in weight stigma views. Using target descriptions, a woman described as having lost weight through lifestyle modifications (i.e., diet and exercise) was rated to be healthier and more physically attractive compared to a woman described as having lost weight through surgical procedures (Mattingly, Stambush, & Hill, 2009). Thus, it may not be the weight loss itself that alters the impression but the effort one puts into achieving that outcome. However, it is worth noting that weight loss in individuals who are higher weight may

reinforce the perceiver's weight bias, as it may confirm in their mind, the widespread, however incorrect, belief that weight is entirely controllable (Blaine et al., 2002). Therefore, losing weight as an impression formation strategy is not truly conveying a *favourable* impression as it perpetuates negative social judgments and weight bias beliefs.

Another strategy people may use to make a desired impression is through engaging in certain admirable behaviours, such as exercise. Individuals who are described as regular exercisers are rated more favourably on personality and physical characteristics compared to those described as non-exercisers (Martin et al., 2000; Martin Ginis et al., 2003). This positive impression carries over for those described as overweight. More specifically, individuals who were described as overweight who engaged in regular exercise were also rated more positively on various personality and physical dimensions compared to individuals said to be overweight and non-exercisers (Martin Ginis & Leary, 2006). Thus, there appears to be something about a praiseworthy behavioural characteristic, such as exercise, that can buffer negative stereotypes typically associated with being overweight. However, it may be the case again that people are perceiving exercise as complying with societal standards of valuing hard work and self-control when it comes to health behaviours in the pursuit of weight loss.

Another behaviour that has been examined as a method to inform impressions is the type of body talk women engage in among other women in social situations. In one study, a woman who was described as someone who engaged in positive body talk (e.g., expressed body satisfaction) in a group discussion situation among other women was rated as more likeable than a woman who engaged in negative body talk (e.g., expressed body dissatisfaction; Tompkins, Martz, Rocheleau, & Bazzini, 2009). Additionally,

regardless of her size (i.e., higher or lower weight) a woman who was described as engaging in positive body talk was rated as having more likeable personality traits compared to a woman who engaged in negative body talk (Barwick, Bazzini, Martz, Rocheleau, & Curtin, 2012). Therefore, speaking positively about one's own body to others, regardless of body size or shape, appears to have its interpersonal advantages and may be a much better tactic compared to the other societal conforming strategies previously mentioned.

One approach that has yet to be investigated is impression formation based on a more indirect tactic (Leary, 1995), for example how one portrays his/her overall body image. As stated previously, positive body talk in a group discussion, whereby an individual is making a direct (i.e., explicit tactic; Leary, 1995) attempt to create a certain impression, has been effective in influencing impression formation (Barwick et al., 2012; Tompkins et al., 2009). However, researchers have yet to examine whether there are social advantages to being described as someone with an overall positive body image, not just someone who talks positively about her body, even if an individual is higher weight.

Within the body image literature, research has begun to address the differences between negative and positive body image constructs in that each one involves its own unique characteristics. Striegel-Moore and Cachelin (1999) suggested positive body image was not simply the opposite of negative body image. That is to say, just because an individual expresses low negative body image does not mean that an individual possesses a positive body image. An individual who has a positive body image generally holds favourable opinions of his/her own body, accepts his/her body for what it is, respects his/her body by attending to its needs (e.g., engages in healthy behaviours), and rejects

media portrayals of an “ideal” body to protect oneself from negative thoughts and emotions (Tylka, 2011). Individuals who possess a more positive body image report a higher level of global self-esteem, have less of a history of yo-yo dieting, and tend to feel their body image has influenced their life and overall functioning in a favourable manner compared to individuals with a more negative body image (Williams et al., 2004). There are abundant negative outcomes related to employment, personal health and psychological functioning, as well as social interactions for those who are higher weight (Puhl & Heuer, 2009). In addition to the intrapersonal benefits of positive body image, exploring factors that could potentially improve overall functioning and interpersonal relations (e.g., presenting oneself as having positive body image) for individuals with higher weight is vital in a current weight-centric society. This would align with weight-inclusive approaches to health promotion to support the notion that well-being is possible regardless of where someone falls along the weight spectrum (Bacon, 2006; Tylka et al., 2014).

It is likely that one’s own characteristics can impact how he/she forms an impression of another person (Tucker et al., 2007). Some research suggests this may be attributed to social-identity theory (Tajfel & Turner, 2004), whereby people generally tend to positively evaluate others with whom they share an identity or group membership. For example, someone who self-describes themselves as a regular exerciser may hold a more favourable impression of someone who is also a regular exerciser compared to someone who is a non-exerciser. Thus, as other studies examining impression formation have looked at the impact of the rater’s own personal characteristics, such as their own exercise behaviours (Martin Ginis et al., 2003), own anti-fat attitudes (Bullock et al.,

2011) or positive self-talk and body esteem (Tucker et al., 2007), the present study also accounted for the rater's own characteristics on the impressions they formed.

The present study focused on impression formation in women, as the negative social consequences of being higher weight are greater for women compared to men (Tiggemann & Rothblum, 1988). In addition, women are more likely to base their self-worth on how well they fit into the societal norm and as a result more often conform to these norms in order to garner approval from other females evaluating them (Smith & Leaper, 2006). The prevalence of dieting behaviours among women and the mounting evidence linking several adverse health issues (Lissner et al., 1991; Nilsson, 2008) and psychological well-being (Olson, Visck, McDonnell, & DiPietro, 2012; Osborn, Forys, Psota, & Sbrocco, 2011) to weight loss pursuits (e.g., weight cycling) is cause for concern. Finding ways to encourage women to focus less attention on weight management and more attention on weight-inclusive health promotion is vital. In line with the aim of the present study, Tompkins and colleagues (2009) how women found body acceptance, in the form of positive body talk, as a more appealing characteristic in other women compared to engaging in body derogation. This concept was expanded upon in the current study.

Purpose

The purpose of the present study was to examine whether the impression formed of a target was different based on the target's described weight trajectory and also based on the target's described overall body image attitudes (i.e., positive or negative). There were two research questions:

- 1) Do the impressions formed about a target (i.e., personality and physical ratings) differ based on information provided about the target's weight trajectory (i.e., gaining weight, losing weight, or maintaining a stable weight)?
- 2) Do the impressions formed about an overweight target (i.e., personality and physical ratings) differ based on the target's described body image attitudes (i.e., positive body image, negative body image, no mention of body image)?

Hypotheses

Hypothesis 1. To test research question 1, it was hypothesized that the target described as being on a weight loss trajectory would be rated more favourably on personality and physical characteristics compared to the target described as being on a stable overweight trajectory and the target described as being on a weight gain trajectory. In addition, it was hypothesized that these characteristics would be significantly different between these groups even after accounting for the rater's own body image and weight biases (i., acting as covariates). Weight bias is reflected in perceiving overweight individuals to have a moral flaw (DeJong, 1993). Further, participants rated a female target as more healthy (e.g., eating healthier and exercising more frequently) and competent, and less sloppy and lazy when viewing a photograph of the target after losing weight compared to the initial photograph of that target when she was higher weight (Fardouly & Vartanian, 2012), suggesting that weight loss produced a positive rating. Thus, a similar finding was hypothesized in the current study using a paragraph description of a woman who was higher weight on a weight loss trajectory.

In addition, it was believed there would be very few (if any) significant differences in personality and physical characteristics between the stable overweight and

weight gain trajectory. This was conceptually drawn on from the body image literature where a “threshold effect” has been identified (Foster & Matz, 2004; Sarwer & Thompson, 2002), stating that individuals do not necessarily feel more dissatisfied with themselves if they are overweight and gain more weight. It was believed a similar effect may be true for impression formation as the target has already been described as overweight and thus, may have reached the threshold for a negative impression. However, as research looking at the differences between a weight stable and weight gain trajectory have yet to be investigated with impression formation, this hypothesis was exploratory in nature.

Hypothesis 2. To test research question 2, it was hypothesized the overweight target described as having a positive body image would be rated most favourably on personality and physical characteristics compared to the overweight target described as having a negative body image and the overweight target whose body image was not described. Again, it was hypothesized that the personality and physical characteristics would be significantly different between these groups even after accounting for the rater’s own body image and weight biases (i.e., acting as covariates). This hypothesis was conceptually based on previous literature examining positive body talk in social interactions (Barwick et al., 2012; Tompkins et al., 2009), as women who spoke positively about their body were perceived as more likeable overall. It was believed the effect of positive body talk would extend to a woman described as having an overall positive body image, including the element of positive body talk among additional positive characteristics associated with positive body image. Also, an individual who has positive body image is more likely to surround themselves with others who have a

positive body image to help maintain their own positive outlook (Tylka, 2011). Thus, portraying positive body image is recognized as an admirable quality in another person and could contribute to a favourable impression.

Methods

The present study used an experimental design using five variations of a written description of a target in attempt to manipulate the impressions formed.

Participants

Participants were young adult women ($N = 256$) who were between the ages of 18-35 years old and who had no previous history of a clinical eating disorder. The mean age was 20.61 years ($SD = 2.32$) and they had a mean body mass index score of 23.78 ($SD = 4.33$), calculated from self-reported height and weight measurements. Body mass index scores ranged from 16.60-39.60. The majority of participants self-identified their race as Caucasian ($n = 203$), African-American ($n = 12$), Mixed race ($n = 11$) and East Asian ($n = 5$). Participants included undergraduate students ($n = 229$), graduate students ($n = 15$) and employed women working in various careers ($n = 12$). For those participants who were students, most participants were from kinesiology ($n = 103$), physical education ($n = 64$), linguistics ($n = 18$), and psychology ($n = 13$) degree programs. Participants indicated whether or not they had attempted to lose weight at some point in their life; 218 women reported “yes” and 38 women reported “no”. When asked what their current weight trajectory was at the time of study participation, 56 women indicated a weight loss trajectory, 129 women indicated a stable weight trajectory, and 71 women indicated a weight gain trajectory. When asked to indicate their overall body image

beliefs, 137 women reported having mostly a positive body image, 66 women reported a neutral body image and 53 women reported having mostly a negative body image.

Measures

The questionnaire package included the following:

Impression Formation Questionnaire.

Target descriptions. Each participant randomly received one of five paragraphs describing the target (see Appendices). These paragraphs were modeled after those used by Martin and colleagues (2000) and Mattingly and colleagues (2009), with modifications to describe the target's weight trajectory and/or overall body image. All five scenarios consistently described the target as follows:

Julia is 30 years old and works as a high school teacher in an urban area. She has taught at the same school for five years now and teaches classes in English, biology and math. Julia is of average height and has brown eyes and medium-length dark hair. For most of her adult life, Julia has been overweight [...] Julia also has several hobbies outside of teaching, that include attending music festivals, shopping and going out for dinner in the city with her friends.

Where the ellipses occur in the general paragraph description above, additional information was added to distinguish the five scenarios. In scenario one, to reflect the weight gain trajectory, the following information was added to the description: "Over the past few months, she has put on about 15 lbs of additional weight." In scenario two, to reflect the weight loss trajectory, the following information was inserted into the description: "Over the past few months, she decided to lose weight and so far, has lost about 15 lbs." In scenario three, to reflect the stable overweight trajectory (i.e., the

control group used for each research question), the following information was added to the description: “Over the past few months, her weight has remained fairly stable.” In scenario four, to reflect the stable overweight trajectory with positive body image, the following information was added to the description: “Over the past few months, her weight has remained fairly stable. Julia is satisfied and has great appreciation for her body. She has high self-esteem because of her abilities, she often talks positively about her body and overall has a positive body image.” In scenario five, to reflect the stable overweight trajectory with negative body image, the following information was added to the description: “Over the past few months, her weight has remained fairly stable. Julia is not satisfied and has little appreciation for her body. She has low self-esteem because of her weight, she often talks negatively about her body and overall has a negative body image.” The manipulated information about weight trajectory and/or body image was placed in the middle of the paragraph description to model previous impression formation studies that have used this placement (Lindwall & Martin Ginis, 2006; Martin Ginis et al., 2000; Martin Ginis et al., 2003; Martin Ginis & Leary, 2006; Mattingly et al., 2009).

Target ratings (Personality). The target was rated on 17 personality dimensions, such as mean/kind-hearted, and unsociable/sociable. This scale uses a 9-point semantic differential rating scale, where opposing word pairs were anchored at either end of the scale, for example, 1 = *mean* to 9 = *kind-hearted*. Higher scores represent a more favourable impression of the target.

Target ratings (Physical). The target was rated on nine physical appearance dimensions, such as unattractive/attractive appearance, and physically sickly/healthy. This scale also uses a 9-point semantic differential rating scale, such that opposing word

pairs were anchored at either end of the scale, for example, 1 = *unattractive appearance* to 9 = *attractive appearance*. Higher scores represent a more favourable impression of the target.

Body Appreciation Scale-2 (BAS-2; Tylka & Wood-Barcalow, 2015b). The BAS-2 was refined from the original measure, the Body Appreciation Scale (Avalos, Tylka, & Wood-Barcalow, 2005) which consists of 13 items. The BAS-2 consists of 10 items and is used to assess the extent to which women: (a) hold favourable opinions of their bodies, (b) accept their bodies in spite of their weight, body shape, and imperfections, (c) respect their bodies by attending to their body's needs and engaging in healthy behaviours, and (d) protect their body image by rejecting unrealistic images of the thin-ideal prototype portrayed in the media. An example would be, "I take a positive attitude towards my body." The BAS-2 items are rated using a 5-point scale, on how true the item is about the individual completing it, with a scale ranging from 1 = *never* to 5 = *always*. Scores were averaged to obtain an overall body appreciation score where higher scores reflect greater body appreciation. The BAS-2 has been shown to be a reliable measure used in young adult women (Tylka & Wood-Barcalow, 2015b). The Cronbach's alpha for the current sample was $\alpha = .89$.

Eating Disorder Inventory-Body Dissatisfaction subscale (EDI-BD; Garner, Olmstead, & Polivy, 1983). This scale consists of nine items and is a self-report scale that is used to assess participants' dissatisfaction with specific body sites such as waist, hips, thighs, and buttocks. It uses a 6-point Likert scale ranging from 1 = *always* to 6 = *never*. Scores were averaged to obtain an overall body dissatisfaction score. Higher scores

indicate that participants are less dissatisfied with their bodies. The Cronbach's alpha for this body dissatisfaction measure was $\alpha = .86$.

Anti-fat Attitudes (AFA; Crandall, 1994). Crandall's 13-item anti-fat attitudes questionnaire is used to assess explicit anti-fat attitudes. This measure is comprised of three subscales: dislike (7 items); fear of fat (3 items); and willpower (3 items). The dislike subscale assesses an individual's aversion toward fat people (e.g., "I don't like fat people much"). The fear of fat subscale assesses the level of fear or anxiety one has of becoming overweight (e.g., "I worry about becoming fat"). The willpower subscale assesses the belief that being overweight is a matter of personal control or lack thereof (e.g., "Fat people tend to be fat pretty much through their own fault"). Items were scored on a 10-point Likert scale 1 = *very strongly disagree* to 9 = *very strongly agree*. Scores were averaged to produce an overall score for each subscale. Higher scores indicated greater anti-fat attitudes. This measure has shown high internal consistency with use in women (Scott & Rosen, 2015). AFA-dislike and AFA-willpower were significantly correlated with each other ($r = .38, p < .001$). A composite score of these two subscales was created and used for analysis, omitting the fear of fat subscale. This was based on previous research which used only the dislike and willpower composite score (Klaczynski, Goold, & Mudry, 2004; O'Bryan, Fishbein & Ritchey, 2004) and who reported a similar correlation between the two subscales ($r = .41, p < .001$; Bullock, Stambush, & Mattingly, 2011). These two subscales were also collapsed based on the theoretical similarity between them as discussed in Crandall (1994). The Cronbach's alpha for the composite score was $\alpha = .81$.

Demographic questionnaire. This assessed the participant's age, race, year in school, major in school, current height and weight through self-report, and weight history information that were used to describe the participants' characteristics.

Procedures

Ethics clearance was obtained from the university's research ethics board prior to data collection. Participants were recruited through posters placed around campus and announcements made in undergraduate classes to participate in a study about perceptions of other people. Participants were provided with an option to complete the questionnaire online (via a secure and anonymous website link) or in-person in a private laboratory on campus. Whether completed online or in-person, all participants provided informed consent prior to commencing the questionnaire package. All participants were randomly assigned to receive one of the five written descriptions of the target without their knowledge. Participants were instructed to read the paragraph carefully and then complete the target ratings questionnaire following the paragraph to rate the target they had just read about on several different characteristics. Participants were then instructed to complete the rest of the randomized questionnaire package (BAS-2, AFA, EDI-BD, demographic information) in reference to themselves, not based on the person described in the scenario. Once their questionnaire package was submitted, participants were fully debriefed about the purpose of the study and provided with a debrief form to take.

Data Analysis

Bivariate correlations were conducted with the BAS-2, body dissatisfaction, AFA-dislike subscale, AFA-willpower subscale, AFA-dis/will composite score and all personality and physical characteristics to check for possible covariates for each research

question (see Tables 4.1-4.5). Based on the strength and significance of these correlations with the trait characteristics, the composite AFA-dis/will score was used as a potential covariate within the preceding analyses.

For research question 1, two separate MANCOVAs were conducted. For the first MANCOVA, the independent variable was target weight trajectory (i.e., weight gain scenario, weight loss scenario, stable overweight scenario) with the dependent variables being the target ratings for personality characteristics. For the second MANCOVA, the independent variable was target weight trajectory (i.e., weight gain scenario, weight loss scenario, stable overweight scenario) with the dependent variables being the target ratings for physical characteristics. The composite AFA-dislike/willpower score was used as the covariate in both MANCOVAs.

For research question 2, two separate MANCOVAs were conducted. For the first MANCOVA, the independent variable was target body image (stable overweight scenario, stable overweight with positive body image, stable overweight with negative body image) and the dependent variables were target ratings for personality characteristics. For the second MANCOVA, the independent variable was target body image (stable overweight scenario, stable overweight with positive body image, stable overweight with negative body image) and the dependent variables were target ratings for physical characteristics. The composite AFA-dislike/willpower score was used as the covariate in both MANCOVAs.

Results

Prior to any analysis, data cleaning and assumptions were run based on recommendations from Field (2013) on procedures for MANCOVA analysis. Two

missing values were identified within the physical target ratings and were replaced with the series mean. Within each of the five target description groups, outliers and normal distribution were checked for all target ratings. Three rounds of data cleaning were performed to deal with all potential outliers within each group. Outliers were identified with box plots and when found, were deleted and replaced with the series mean of the personality or physical characteristic for that group. Skewness and kurtosis values for all target ratings were checked within each group for univariate normality and were all fairly close to ± 1.0 . To check multivariate normality, Mahalanobis' distance was calculated to determine whether all target ratings fell under the critical value. For the personality characteristics ($n = 17$), the critical value for $p < .01$ was $\chi^2 = 33.41$ and for the physical characteristics ($n = 9$), the critical value for $p < .01$ was $\chi^2 = 21.67$. All scores for personality characteristics were under the critical value, however, two scores were slightly over the critical value for physical characteristics, identifying them as potential multivariate outliers. Upon inspection, the scores did not differ drastically from other values and therefore, were left in the analysis. Thus, the assumption of multivariate normality was met. Among the five groups, there were fairly equal group sizes (weight gain $n = 52$; weight loss $n = 58$; stable weight $n = 49$; stable weight with positive body image $n = 50$; stable weight with negative body image $n = 47$). As participants were randomized into one of the five groups, slight variation in cell size were expected, however, this assumption was met. For the homogeneity of covariance matrices assumption, a Box's M statistic was calculated for each MANCOVA. All four Box's M statistics were significant, $p < .001$, therefore, the assumption was not met. Therefore, Pillai's trace was used as the criterion for multivariate effects, as it is considered robust

when the homogeneity of covariance matrices assumption is not met (Tabachnick & Fidell, 2007). For the homogeneity of variance assumption, Levene's statistics were calculated for each item. For research question 1, 10 personality characteristics and four physical characteristics had non-significant Levene's statistics and seven personality characteristics and five physical characteristics had significant Levene's statistics, therefore the assumption of homogeneity of variance was met for 14 of the possible 26 characteristics. For research question 2, three personality characteristics and five physical characteristics had non-significant Levene's statistics and 14 personality characteristics and four physical characteristics had significant Levene's statistics, therefore the assumption of homogeneity of variance was met for eight of the possible 26 characteristics. Games-Howell post-hoc tests were conducted when this assumption was not met (Field, 2013). Bonferroni post-hoc tests were used when homogeneity of variances were met based on recommendations by Tabachnick and Fidell (1996) and previous research with a similar experiment design using this post-hoc procedure (Lindwall & Martin Ginis, 2006; Martin et al., 2000; Martin Ginis et al., 2003; Martin Ginis & Leary, 2006). Martin Ginis and colleagues (2000) recommended that readers, "interpret the results by considering the effects of the independent variables on the full range of measured attributes rather than by focusing on their effects on any single attribute." In order to account for family-wise error with multiple comparisons, a Bonferroni correction was calculated and used as the critical value to determine statistical significance (Field, 2013). As the study has been divided into two research questions, the p-value was adjusted to $p = .025$. Next, as there were three group comparisons within each research question, the p-value was further adjusted to $p = .0083$. Thus, all univariate

results were compared to this new corrected value in order to determine statistical significance.

Descriptive statistics were calculated for each of the study variables (BAS-2, BD, AFA subscales) and are displayed in Table 4.6 at the end of the results section. Mean values are presented separately for each of the five conditions and an overall sample mean across conditions. There were no statistically significant differences between the five conditions for all study variables. For the overall sample, the mean scores for the BAS-2 ($M = 3.90$, $SD = .61$; Tylka & Wood-Barcalow, 2015), BD subscale ($M = 3.83$, $SD = .91$; Gordon, Castro, Sitnikov, & Holm-Denoma, 2010), and AFA-dislike and willpower subscales ($M = 2.57$, $SD = .89$; Bullock et al., 2011; Klaczynski et al., 2004; O'Bryan et al., 2004) were similar to values found in previous research.

For research question 1, two one-way MANCOVAs were conducted to examine the effect of the target weight trajectory group (i.e., weight gain scenario, weight loss scenario, and stable overweight scenario) on all 17 target ratings for personality characteristics and 9 physical characteristics, while controlling for the composite covariate, AFA-dislike/willpower. For the personality characteristics, AFA-dislike/willpower was a significant covariate, $F(17, 139) = 2.73$, $p < .001$. A significant group multivariate effect for target weight trajectory was found after controlling for the covariate, Pillai's Trace = .42, $F(34, 280) = 2.17$, $p < .001$, $\eta_p^2 = .21$, observed power = 1.00. Given the significance of the multivariate test, the univariate main effects were examined.

One-way ANCOVAs revealed significant univariate main effects for two personality characteristic ratings (see Table 4.7 at end of results section): lazy/works

hard; and lacks self-control/has self-control. Follow-up pairwise comparisons were performed next to determine how the target weight trajectory groups differed. Overall, the target in the losing weight trajectory scenario was rated to be harder working and have more self-control than the target described as gaining weight. The target in the losing weight trajectory scenario was rated to have more self-control than the target described in the stable overweight trajectory. Lastly, the target in the stable overweight trajectory was rated to have more self-control than the gaining weight trajectory.

For the physical characteristics, AFA-dislike/willpower was a significant covariate, $F(9, 147) = 3.80, p < .001$. A significant group multivariate effect for target weight trajectory was found after controlling for the covariate, Pillai's Trace = .35, $F(18, 296) = 3.53, p < .001, \eta_p^2 = .18$, observed power = 1.00. Given the significance of the multivariate test, the univariate main effects were examined. One-way ANCOVAs revealed significant univariate main effects for five physical characteristic ratings (see Table 4.8 at end of results section): overweight/underweight; not athletic/athletic; physically sickly/physically healthy; unattractive body shape/attractive body shape; and unfit/fit. Follow-up pairwise comparisons were performed next to determine how the target weight trajectory groups differed. Overall, the target described in the losing weight trajectory scenario was rated to be less overweight, more athletic, physically healthy, had a more attractive body shape, and was fitter than the target described in the gaining weight scenario. The target described in the losing weight trajectory was also rated to be less overweight, more athletic, physically healthy, and fitter than the target described in the stable overweight trajectory.

For research question 2, two one-way MANCOVAs were conducted to examine the effect of the target body image group (i.e., stable overweight scenario; stable overweight with positive body image; stable overweight with negative body image) on all 17 target ratings for personality characteristics and 9 physical characteristics, while controlling for the covariate, AFA-dislike/willpower. For the personality characteristics, AFA-dislike/willpower was a significant covariate, $F(17, 126) = 2.65, p < .001$. In addition, a significant group multivariate effect for target body image was found after controlling for the covariate, Pillai's Trace = 1.09, $F(34, 254) = 8.90, p < .001, \eta_p^2 = .54$, observed power = 1.00. Given the significance of the multivariate test, the univariate main effects were examined.

One-way ANCOVAs revealed significant univariate main effects for 13 personality characteristic ratings (see Table 4.9 at end of results section): mean/kind-hearted; shy/outgoing; lazy/works hard; timid/brave; cold or distant/warm or affectionate; vulnerable/resilient; dull or boring/vibrant or lively; sad/cheerful; lacks self-confidence/has self-confidence; unsociable/sociable; stubborn/agreeable; lacks self-control/has self-control; and unappreciative of body/appreciative of body. Follow-up pairwise comparisons were performed next to determine how the target body image groups differed.

Overall, the target described as having a positive body image was rated more positively on numerous characteristics (i.e., kind-hearted, outgoing, harder working, braver, warm and affectionate, resilient, vibrant and lively, cheerful, self-confident, sociable, agreeable, having more self-control, and more appreciation for her body) compared to the target described as having a negative body image. The target described

as having a positive body image was also rated more positively (i.e., kind-hearted, outgoing, harder working, braver, warm and affectionate, resilient, vibrant and lively, cheerful, self-confident, sociable, and appreciative of her body) compared to the control target (described as at a stable overweight with no mention of body image attitudes). Also, the control target was rated to be more outgoing, braver, resilient, cheerful, self-confident, agreeable, and appreciative of her body than the target described as having a negative body image.

For the physical characteristics, AFA-dislike/willpower was a significant covariate, $F(9,134) = 4.32, p < .001$. Further, a significant group multivariate effect for target body image was found after controlling for the covariate, Pillai's Trace = .51, $F(18, 270) = 5.07, p < .001, \eta_p^2 = .25$, observed power = 1.00. Given the significance of the multivariate test, the univariate main effects were examined. One-way ANCOVAs revealed significant univariate main effects for eight physical characteristic ratings (see Table 4.10 at end of results section): unattractive/attractive appearance; tired/energetic; not athletic/athletic; physically sickly/physically healthy; unattractive/attractive body shape; unfit/fit; unfeminine/feminine body shape; and very little muscle tone/noticeable muscle tone. Follow-up pairwise comparisons were performed next to determine how the target body image groups differed.

Overall, the target with a positive body image was rated to have a more attractive physical appearance, to be more energetic, athletic, physically healthy, an attractive body shape, fitter, have a more feminine body shape, and more noticeable muscle tone than the target described as having a negative body image. The target described with a positive body image was rated to have a more attractive physical appearance, physically healthy,

an attractive body shape, and have more of a feminine body shape than the control target.

Lastly, the control target was rated to have a more attractive physical appearance, energetic, an attractive body shape, and more of a feminine body shape than the target described as having a negative body image.

Table 4.1

Correlations of study variables with personality characteristics part 1.

	1	2	3	4	5	6	7	8	9	10	11
1. BA	-	.49**	-.05	-.02	.01	.13	.10	.07	-.06	.02	-.07
2. BD	.53**	-	-.04	.06	-.02	.10	-.07	.13	-.13	-.02	-.09
3. AFA-dislike	.05	.10	-	.38**	.83**	-.04	-.11	-.27	-.15	-.14	-.05
4. AFA-willpower	.17*	.16	.40**	-	.64**	-.01	-.06	-.17*	-.18*	-.12	.02
5. AFA-dis/will	.16*	.04	.79**	.73**	-	.01	-.10	-.23**	-.19*	-.14	-.07
6. Mean/kind-hearted	.04	.09	-.19*	-.05	-.11	-	.37**	.42**	.45**	.34**	.55**
7. Shy/outgoing	.04	.11	-.27**	-.03	-.21**	.21**	-	.37**	.59**	.23**	.54**
8. Lazy/works hard	.02	.16*	-.30**	-.18*	-.30**	.27**	.32**	-	.37**	.50**	.42**
9. Timid/brave	.01	.01	-.28**	-.15	-.26**	.22**	.50**	.36**	-	.29**	.52**
10. Unintelligent/intelligent	.07	.03	-.23**	-.11	-.21**	.45**	.24**	.40**	.23**	-	.40**
11. Cold, distant/warm, affectionate	.03	.02	-.31**	-.12	-.24**	.46**	.44**	.21**	.36**	.38**	-

Note. BA = Body appreciation; BD = Body dissatisfaction; AFA-dislike = Anti-fat attitudes dislike subscale; AFA-willpower = Anti-fat attitudes willpower subscale; AFA-dis/will = Anti-fat attitudes composite of dislike and willpower subscales; correlation values *below* the diagonal belong to research question 1, examining target weight trajectory scenarios; correlation values *above* the diagonal belong to research question 2, examining target body image scenarios. ** $p < .01$, * $p < .05$.

Table 4.2

Correlations of study variables with personality characteristics part 2.

	1	2	3	4	5	6	7	8	9	10	11
1. BA	-	.49**	-.05	-.02	.01	.11	.13	.03	.03	.07	.03
2. BD	.53**	-	-.04	.06	-.02	-.05	.18*	-.10	-.08	-.07	.03
3. AFA-dislike	.05	.10	-	.38**	.83**	-.14	-.08	-.04	-.11	-.08	-.03
4. AFA-willpower	.17*	.16	.40**	-	.64**	-.23**	.09	-.07	-.10	-.21*	.03
5. AFA-dis/will	.16*	.04	.79**	.73**	-	-.20*	-.01	-.05	-.10	-.12	-.03
6. Vulnerable/resilient	-.03	.05	-.22**	-.13	-.24**	-	.29**	.50**	.72**	.75**	.01
7. Sloppy/neat	.01	.10	-.17*	-.11	-.18*	.21**	-	.26**	.30**	.22**	.18*
8. Dull, boring/vibrant, lively	-.05	.02	-.20*	-.09	-.20*	.27**	.30**	-	.59**	.53**	.20*
9. Sad/cheerful	-.07	-.08	-.19*	-.07	-.10	.35**	.23**	.34**	-	.85**	.07
10. Lacks/has self-confidence	.12	.07	-.15	-.15	-.18*	.38**	.22**	.39**	.38**	-	-.05
11. Arrogant/modest	.03	.07	-.16*	-.02	-.05	.06	.27**	.11	.23**	.10	-

Note. BA = Body appreciation; BD = Body dissatisfaction; AFA-dislike = Anti-fat attitudes dislike subscale; AFA-willpower = Anti-fat attitudes willpower subscale; AFA-dis/will = Anti-fat attitudes composite of dislike and willpower subscales; correlation values *below* the diagonal belong to research question 1, examining target weight trajectory scenarios; correlation values *above* the diagonal belong to research question 2, examining target body image scenarios. ** $p < .01$, * $p < .05$.

Table 4.3

Correlations of study variables with personality characteristics part 3.

	1	2	3	4	5	6	7	8	9	10
1. BA	-	.49**	-.05	-.02	.01	-.06	.12	.09	.19*	-.02
2. BD	.53**	-	-.04	.06	-.02	-.10	.10	.10	.16	-.10
3. AFA-dislike	.05	.10	-	.38**	.83**	-.10	-.09	-.29**	-.18*	-.08
4. AFA-willpower	.17*	.16	.40**	-	.64**	-.10	-.01	-.14	-.10	-.18
5. AFA-dis/will	.16*	.04	.79**	.73**	-	-.09	-.06	-.34**	-.20*	-.09
6. Unsociable/sociable	-.02	-.04	-.14	-.03	-.11	-	.26**	.20*	.21*	.43**
7. Stubborn/agreeable	-.03	-.07	-.02	.03	.05	.26**	-	.51**	.55**	.33**
8. Lacks/has self-control	.04	.05	-.20*	-.16	-.26**	.21**	.20*	-	.48**	.37**
9. Selfish/selfless	-.07	.05	-.06	.14	.05	.18*	.36**	.11	-	.18*
10. Unappreciative/appreciative of body	.05	.01	-.15	-.08	-.13	.20*	.05	.25**	-.04	-

Note. BA = Body appreciation; BD = Body dissatisfaction; AFA-dislike = Anti-fat attitudes dislike subscale; AFA-willpower = Anti-fat attitudes willpower subscale; AFA-dis/will = Anti-fat attitudes composite of dislike and willpower subscales; correlation values *below* the diagonal belong to research question 1, examining target weight trajectory scenarios; correlation values *above* the diagonal belong to research question 2, examining target body image scenarios.

** $p < .01$, * $p < .05$.

Table 4.4

Correlations of study variables with physical characteristics part 1.

	1	2	3	4	5	6	7	8	9	10
1. BA	-	.49**	-.05	-.02	.01	.09	.20	-.05	-.02	.02
2. BD	.53**	-	-.04	.06	-.02	-.09	-.19*	-.11	-.15	-.16
3. AFA-dislike	.05	.10	-	.38**	.83**	-.18*	-.13	-.13	-.26**	-.25**
4. AFA-willpower	.17*	.16	.40**	-	.64**	-.22**	-.12	-.11	-.35**	-.19*
5. AFA-dis/will	.16*	.04	.79**	.73**	-	-.26**	-.13	-.20**	-.35**	-.32**
6. Unattractive/attractive appearance	-.07	-.16*	-.08	-.01	-.08	-	.55**	.31**	.36**	.46**
7. Tired/energetic	-.04	-.09	-.18*	-.20*	-.22**	.23**	-	.22**	.34**	.51**
8. Overweight/underweight	-.06	-.08	-.08	-.17*	-.16*	-.01	.22**	-	.51**	.43**
9. Not athletic/athletic	-.05	-.04	-.20	-.24*	-.28**	.12	.29**	.57**	-	.37**
10. Physically sickly/healthy	-.03	.01	-.24**	-.07	-.19*	.51**	.40**	.36**	.37**	-

Note. BA = Body appreciation; BD = Body dissatisfaction; AFA-dislike = Anti-fat attitudes dislike subscale; AFA-willpower = Anti-fat attitudes willpower subscale; AFA-dis/will = Anti-fat attitudes composite of dislike and willpower subscales; correlation values *below* the diagonal belong to research question 1, examining target weight trajectory scenarios; correlation values *above* the diagonal belong to research question 2, examining target body image scenarios.

** $p < .01$, * $p < .05$.

Table 4.5

Correlations of study variables with physical characteristics part 2.

	1	2	3	4	5	6	7	8	9
1. BA	-	.49**	-.05	-.02	.01	-.02	-.09	.03	-.04
2. BD	.53**	-	-.04	.06	-.02	-.12	-.16	-.03	-.16
3. AFA-dislike	.05	.10	-	.38**	.83**	-.20**	-.25**	-.17**	-.26**
4. AFA-willpower	.17*	.16	.40**	-	.64**	-.25**	-.27**	-.10	-.30**
5. AFA-dis/will	.16*	.04	.79**	.73**	-	-.24**	-.31**	-.14	-.37**
6. Unattractive/attractive body shape	-.12	-.02	-.25**	-.23**	-.30**	-	.60**	.42**	.47**
7. Unfit/fit	-.03	-.14	-.19*	-.24**	-.22**	.49**	-	.40**	.70**
8. Unfeminine/feminine body shape	-.05	.03	-.32**	-.22**	-.34**	.41**	.21**	-	.31**
9. Very little/noticeable muscle tone	-.05	-.10	-.20*	-.24**	-.26**	.45**	.61**	.30**	-

Note. BA = Body appreciation; BD = Body dissatisfaction; AFA-dislike = Anti-fat attitudes dislike subscale; AFA-willpower = Anti-fat attitudes willpower subscale; AFA-dis/will = Anti-fat attitudes composite of dislike and willpower subscales; correlation values *below* the diagonal belong to research question 1, examining target weight trajectory scenarios; correlation values *above* the diagonal belong to research question 2, examining target body image scenarios. ** $p < .01$, * $p < .05$.

Table 4.6

Means and standard deviations for study variables.

	Stable Overweight	Losing Weight	Gaining Weight	Positive Body Image	Negative Body Image	Overall Sample
Body appreciation	3.94 (.52)	3.96 (.60)	3.88 (.65)	3.87 (.63)	3.87 (.64)	3.91 (.61)
Body dissatisfaction	3.74 (.93)	3.98 (.92)	3.74 (.91)	3.74 (.88)	3.94 (.91)	2.83 (.91)
AFA-dislike	2.61 (1.08)	2.59 (.72)	2.73 (.91)	2.47 (.81)	2.46 (.92)	2.57 (.89)
AFA-willpower	5.90 (1.29)	5.90 (1.31)	5.66 (1.32)	5.43 (1.18)	5.77 (1.35)	5.74 (1.29)
AFA-dis/will	3.66 (1.15)	3.75 (1.04)	3.66 (1.00)	3.40 (.95)	3.45 (1.04)	3.59 (1.04)

Note. Body appreciation measured on a 5-point scale; body dissatisfaction measured on a 6-point scale; AFA-dislike = Anti-fat attitudes dislike subscale; AFA-willpower = Anti-fat attitudes willpower subscale; AFA-dis/will = Anti-fat attitudes composite of dislike and willpower subscales, measured on a 9-point scale. ** $p < .01$; * $p < .05$.

Table 4.7

Ratings of Personality Characteristics by Weight Trajectory Group.

Characteristic	Stable Overweight	Losing Weight	Gaining Weight	<i>F</i> statistic
Mean/Kind-hearted	6.86 (1.22)	6.90 (1.15)	7.04 (1.24)	$F_{(2,155)} = .31, p = .73, \eta_p^2 = .004$
Shy/Outgoing	6.63 (1.60)	6.34 (1.46)	6.38 (1.50)	$F_{(2,155)} = .50, p = .61, \eta_p^2 = .006$
Lazy/Works hard	6.37 _{ab} (1.73)	7.00 _a (1.31)	5.71 _b (1.54)	$F_{(2,155)} = 11.20, p = .00, \eta_p^2 = .13$
Timid/Brave	5.75 _{ab} (1.35)	5.98 _a (1.44)	5.38 _b (1.24)	$F_{(2,155)} = 3.19, p = .04, \eta_p^2 = .04$
Unintelligent/Intelligent	7.86 (1.22)	7.81 (1.13)	7.81 (.89)	$F_{(2,155)} = .03, p = .97, \eta_p^2 = .000$
Cold, Distant/Warm, Affectionate	6.86 (1.26)	6.90 (1.40)	7.10 (1.14)	$F_{(2,155)} = .51, p = .60, \eta_p^2 = .007$
Vulnerable/Resilient	5.12 (1.27)	5.44 (.92)	5.13 (1.40)	$F_{(2,155)} = 1.54, p = .22, \eta_p^2 = .02$
Sloppy/Neat	6.45 (1.00)	6.64 (1.33)	6.13 (1.43)	$F_{(2,155)} = 2.37, p = .10, \eta_p^2 = .03$
Dull, Boring/Vibrant, lively	6.60 (.78)	6.81 (1.34)	6.62 (1.47)	$F_{(2,155)} = .57, p = .57, \eta_p^2 = .007$
Sad/Cheerful	6.24 (1.23)	6.53 (.87)	6.59 (.94)	$F_{(2,155)} = 1.71, p = .19, \eta_p^2 = .02$
Lacks/Has self-confidence	5.72 (1.35)	5.26 (1.63)	5.21 (1.70)	$F_{(2,155)} = 1.64, p = .20, \eta_p^2 = .02$
Arrogant/Modest	6.45 _{ab} (1.35)	6.96 _a (1.20)	6.45 _b (.90)	$F_{(2,155)} = 3.65, p = .03, \eta_p^2 = .05$
Unsociable/Sociable	7.50 (1.37)	7.68 (.95)	7.47 (1.31)	$F_{(2,155)} = .53, p = .59, \eta_p^2 = .007$
Stubborn/Agreeable	6.43 (.83)	6.67 (1.28)	6.65 (.85)	$F_{(2,155)} = .88, p = .42, \eta_p^2 = .01$
Lacks/Has self-control	5.55 _a (1.62)	6.28 _b (1.53)	4.73 _c (1.79)	$F_{(2,155)} = 13.71, p = .00, \eta_p^2 = .15$
Selfish/Selfless	6.55 (.97)	6.58 (.99)	6.68 (.93)	$F_{(2,155)} = .26, p = .77, \eta_p^2 = .003$
Unappreciative/Appreciative of body	4.76 (1.70)	4.88 (1.67)	4.43 (.67)	$F_{(2,155)} = 1.50, p = .23, \eta_p^2 = .02$

Note. Within the same row, values that do not share a common letter are significantly different, adjusted $p < .0083$. Bold font indicates a significant univariate effect. Higher mean scores represent a score closer to the right-side anchor characteristic. All ratings were made on a 9-point scale.

Table 4.8

Ratings of Physical Characteristics by Weight Trajectory Group.

Characteristic	Stable Overweight	Losing Weight	Gaining Weight	<i>F</i> statistic
Unattractive/Attractive appearance	5.72 (.85)	5.53 (.80)	5.46 (.77)	$F_{(2,155)} = 1.33, p = .27, \eta_p^2 = .02$
Tired/Energetic	6.14 (1.41)	6.05 (1.40)	5.48 (1.76)	$F_{(2,155)} = 3.14, p = .04, \eta_p^2 = .04$
Overweight/Underweight	2.88 _a (1.44)	3.77 _b (.75)	2.69 _a (1.52)	$F_{(2,155)} = 12.22, p = .00, \eta_p^2 = .14$
Not athletic/Athletic	3.69 _a (1.65)	4.41 _b (.78)	3.20 _a (1.20)	$F_{(2,155)} = 15.57, p = .00, \eta_p^2 = .17$
Physically sickly/Physically healthy	4.77 _a (.76)	5.42 _b (.83)	4.78 _a (1.26)	$F_{(2,155)} = 8.80, p = .00, \eta_p^2 = .10$
Unattractive/Attractive body shape	4.80 _{ab} (.74)	5.03 _a (1.31)	4.30 _b (1.51)	$F_{(2,155)} = 5.72, p = .00, \eta_p^2 = .07$
Unfit/Fit	3.78 _a (1.49)	4.36 _b (1.44)	3.55 _a (.88)	$F_{(2,155)} = 6.54, p = .00, \eta_p^2 = .08$
Unfeminine/Feminine body shape	5.96 (1.41)	5.67 (1.43)	6.12 (1.79)	$F_{(2,155)} = 1.09, p = .34, \eta_p^2 = .01$
Very little/Noticeable muscle tone	3.84 (1.56)	4.02 (1.40)	3.40 (1.47)	$F_{(2,155)} = 2.89, p = .06, \eta_p^2 = .04$

Note. Within the same row, values that do not share a common letter are significantly different, adjusted $p < .0083$. Bold font indicates a significant univariate effect. Higher mean scores represent a score closer to the right-side anchor characteristic. All ratings were made on a 9-point scale.

Table 4.9

Ratings of Personality Characteristics by Target Body Image Group.

Characteristic	Stable Overweight	Positive Body Image	Negative Body Image	<i>F</i> statistic
Mean/Kind-hearted	6.86 _a (1.22)	7.65 _b (.82)	6.23 _c (1.46)	$F_{(2,142)} = 17.11, p = .00, \eta_p^2 = .19$
Shy/Outgoing	6.63 _a (1.60)	7.58 _b (.87)	5.09 _c (1.80)	$F_{(2,142)} = 35.58, p = .00, \eta_p^2 = .33$
Lazy/Works hard	6.37 _a (1.73)	7.17 _b (1.35)	5.74 _a (1.29)	$F_{(2,142)} = 11.75, p = .00, \eta_p^2 = .14$
Timid/Brave	5.75 _a (1.35)	7.40 _b (.77)	4.62 _c (.94)	$F_{(2,142)} = 90.91, p = .00, \eta_p^2 = .56$
Unintelligent/Intelligent	7.86 _{ab} (1.22)	8.27 _a (.72)	7.77 _b (1.03)	$F_{(2,142)} = 3.22, p = .04, \eta_p^2 = .04$
Cold, Distant/Warm, Affectionate	6.86 _a (1.26)	7.79 _b (.86)	6.26 _c (1.37)	$F_{(2,142)} = 20.60, p = .00, \eta_p^2 = .23$
Vulnerable/Resilient	5.12 _a (1.27)	6.58 _b (.98)	3.64 _c (1.59)	$F_{(2,142)} = 65.14, p = .00, \eta_p^2 = .48$
Sloppy/Neat	6.45 _{ab} (1.01)	6.72 _a (1.26)	6.06 _b (1.29)	$F_{(2,142)} = 3.65, p = .03, \eta_p^2 = .05$
Dull, Boring/Vibrant, lively	6.60 _a (.78)	7.75 _b (.87)	6.28 _a (1.51)	$F_{(2,142)} = 23.94, p = .00, \eta_p^2 = .25$
Sad/Cheerful	6.24 _a (1.23)	7.79 _b (.92)	4.19 _c (1.64)	$F_{(2,142)} = 95.67, p = .00, \eta_p^2 = .57$
Lacks/Has self-confidence	5.73 _a (1.35)	8.33 _b (.76)	2.34 _c (1.46)	$F_{(2,142)} = 305.89, p = .00, \eta_p^2 = .81$
Arrogant/Modest	6.45 (1.35)	6.66 (1.32)	6.87 (1.19)	$F_{(2,142)} = 1.22, p = .30, \eta_p^2 = .02$
Unsociable/Sociable	7.50 _a (1.40)	8.29 _b (.73)	6.85 _c (1.56)	$F_{(2,142)} = 15.61, p = .00, \eta_p^2 = .18$
Stubborn/Agreeable	6.43 _a (.83)	6.64 _a (1.47)	5.55 _b (1.41)	$F_{(2,142)} = 9.93, p = .00, \eta_p^2 = .12$
Lacks/Has self-control	5.55 _{ab} (1.62)	6.28 _a (1.59)	4.95 _b (1.37)	$F_{(2,142)} = 9.91, p = .00, \eta_p^2 = .12$
Selfish/Selfless	6.55 (.97)	6.78 (1.37)	6.19 (1.41)	$F_{(2,142)} = 2.77, p = .07, \eta_p^2 = .04$
Unappreciative/Appreciative of body	4.76 _a (1.70)	8.32 _b (.69)	1.49 _c (.68)	$F_{(2,142)} = 452.89, p = .00, \eta_p^2 = .86$

Note. Within the same row, values that do not share a common letter are significantly different, adjusted $p < .0083$. Bold font indicates a significant univariate effect. Higher mean scores represent a score closer to the right-side anchor characteristic. All ratings were made on a 9-point scale.

Table 4.10

Ratings of Physical Characteristics by Target Body Image Group.

Characteristic	Stable Overweight	Positive Body Image	Negative Body Image	<i>F</i> statistic
Unattractive/Attractive appearance	5.72 _a (.85)	6.56 _b (1.49)	4.96 _c (1.49)	$F_{(2,142)} = 19.30, p = .00, \eta_p^2 = .21$
Tired/Energetic	6.14 _a (1.41)	6.90 _a (1.31)	5.15 _b (1.65)	$F_{(2,142)} = 17.52, p = .00, \eta_p^2 = .20$
Overweight/Underweight	2.88 (1.44)	3.28 (1.51)	2.72 (1.51)	$F_{(2,142)} = 1.71, p = .19, \eta_p^2 = .02$
Not athletic/Athletic	3.69 _{ab} (1.65)	4.12 _a (1.51)	3.15 _b (1.37)	$F_{(2,142)} = 5.64, p = .00, \eta_p^2 = .07$
Physically sickly/Physically healthy	4.77 _a (.76)	5.58 _b (1.58)	4.57 _a (.85)	$F_{(2,142)} = 11.13, p = .00, \eta_p^2 = .14$
Unattractive/Attractive body shape	4.80 _a (.74)	5.59 _b (.80)	3.91 _c (1.44)	$F_{(2,142)} = 33.96, p = .00, \eta_p^2 = .32$
Unfit/Fit	3.76 _{ab} (1.49)	4.27 _a (1.48)	3.19 _b (1.56)	$F_{(2,142)} = 6.75, p = .00, \eta_p^2 = .09$
Unfeminine/Feminine body shape	5.96 _a (1.41)	6.80 _b (1.41)	5.10 _c (.10)	$F_{(2,142)} = 26.09, p = .00, \eta_p^2 = .27$
Very little/Noticeable muscle tone	3.84 _a (1.56)	4.10 _a (1.42)	3.23 _b (1.43)	$F_{(2,142)} = 5.31, p = .006, \eta_p^2 = .07$

Note. Within the same row, values that do not share a common letter are significantly different, adjusted $p < .0083$. Bold font indicates a significant univariate effect. Higher mean scores represent a score closer to the right-side anchor characteristic. All ratings were made on a 9-point scale.

Discussion

The purpose of the present study was to determine whether information regarding a described target's weight trajectory (i.e., gaining, losing or maintaining stable weight) or body image attitudes (i.e., negative or positive) could lessen the negative impression formed of a target who was higher weight. The first hypothesis was partially met. For the overall analysis in research question 1, the partial eta squared sizes were large (Cohen, 1992; personality $\eta_p^2 = .21$; physical $\eta_p^2 = .18$) which was consistent with previous research rating targets on these characteristics (Lindwall & Martin Ginis, 2006; Martin et al., 2000). The target described as losing weight was rated more favourably on two out of the 17 personality characteristics compared to the gaining weight trajectory. The number of significantly different personality characteristics in the present study was lower than what has typically been found in previous studies using target descriptions of exercise status to alter impressions (Lindwall & Martin Ginis, 2006; Martin Ginis & Leary, 2006; Martin Ginis et al., 2003; Martin Ginis et al., 2000). This may illustrate how described changes to a woman's weight (i.e., gaining, losing or maintaining weight) may not be strong enough to alter how a rater views a target's personality. Alternatively, it may be that social judgments about other people's weight are mainly focused on specific personality traits (e.g., self-control) rather than a broad spectrum.

The two significantly different characteristics align precisely with existing literature surrounding the controllability aspect of weight bias (Rodin et al., 1989). Thus, it was not surprising the target described as on a losing weight trajectory was rated as harder working (e.g., put in more effort to obtain a thinner body) and have more self-control in the context of weight loss. In addition, the target described as at a stable

overweight trajectory was rated to have more self-control than the target described as gaining weight. Therefore, the present study appears consistent with previous research where weight gain is primarily attributed to personal choice and reflects a lack of willpower (Blaine et al., 2002; Crandall, 1994; Bullock et al., 2011), even when compared to someone who is also higher weight but not currently gaining any more weight. It is worth noting these two characteristics were significantly different between weight trajectory groups even after accounting for the raters' own anti-fat attitudes, specifically with regards to their aversion toward fat people and their belief in personal control of fatness. This demonstrates how damaging these impressions can be, apart from anti-fat attitudes, and provides a basis for more research regarding ways to reduce negative social judgments around weight.

There was conceptual support for the exploratory aspect of the first hypothesis which suggested very few (if any) significant differences between a target described as being at a stable overweight compared to weight gain trajectory. There was only one significantly different characteristic; the target described as at a stable weight was believed to have more self-control than the target described as gaining weight. It should also be noted that the specific statistical significance associated with this post-hoc paring was *just* significantly different between the gaining and stable weight trajectory target ($p = .046$). Therefore, as hypothesized, there may be similarities to the body image literature that suggest a “threshold effect” with weight and dissatisfaction (Foster & Matz, 2004; Sarwer & Thompson, 2002). Although preliminary and in need of more extensive exploration, there may be a “threshold effect” when it comes to negative social judgments for those who are higher weight. More specifically, a person who is higher weight who

gains *more* weight may not be judged any more *negatively* compared to an individual who is higher weight and remains at that same higher weight as a threshold may have been reached with their negative social judgment of that person.

The target described as on a losing weight trajectory was also rated more favourably on five of the nine physical characteristics compared to the gaining weight trajectory. As weight trajectory information is describing changes to the *physical* body, it was not surprising that more physical, rather than personality characteristics, were significantly different between weight trajectory groups. Weight loss can be viewed, by some, as a necessary step to *achieve* all the apparent rewards of a thin body (Allon, 1982). Previous research using a picture manipulation to experimentally test the perceptions of a formerly obese woman who had lost weight had indicated a more favourable impression with weight loss (i.e., more physically healthy as a result of perceived changes to health behaviours; Fardouly & Vartanian, 2012). The present study also demonstrated a favourable impression towards those who were on a weight loss trajectory with the use of just only a verbal description (not photographic manipulation) and with a target described as overweight, compared to a target described as obese in previous research (Fardouly & Vartanian, 2012). Photographs offer more detailed visual representations to inform first impressions compared to written descriptions, whereby participants must formulate their own visual representation of the target. However, descriptions appear to be just as effective at informing social judgments.

It is possible that individuals who are higher weight and lose weight may have their actions perceived as compliant with societal appearance norms (i.e., valuing thinness) and as a result, other individuals may see this as a likeable quality with regards

to both personality and physical attributes (Blaine et al., 2002). However, some of the desired characteristics people hope to achieve with weight loss (e.g., to be viewed as more intelligent, cheerful, self-confident, sociable, attractive) were not evident in the present study, as these characteristics were not significantly different between the weight trajectory groups. Also, weight loss can be disregarded or undervalued for those individuals who remain at a higher weight even after some weight loss (Blaine et al., 2002). Therefore, weight loss may help to shift an impression to slightly more positive ratings for some characteristics but may not alter a larger quantity of personality and physical characteristics to significantly modify the overall impression. Alternatively, these results could be interpreted as a matter of the raters believing it was more socially acceptable to *criticize* the target described as on the weight gain trajectory as opposed to *admiring* the weight loss target.

The second hypothesis was also partially met. Unlike what has typically been seen in previous research using a similar design (i.e., manipulating target descriptions and rating the targets; Lindwall & Martin Ginis, 2006; Martin et al., 2000), the partial eta squared size for the personality characteristics was much larger than for physical characteristics in research question 2 ($\eta_p^2 = .54$, $\eta_p^2 = .25$ respectively). As the target description manipulated a cognitive characteristic (i.e., body image), likely more closely linked with personality, it was not surprising to see the strong effects with the personality ratings in the present study.

The target described as having a positive body image (including high self-esteem) was rated more favourably on 13 out of the 17 personality characteristics compared to the target described to have a negative body image (including low self-esteem). As

hypothesized, an overweight woman described as having a positive body image (including high self-esteem) was rated more favourably on the majority of personality characteristics compared to a woman described as having a negative body image (including low self-esteem). The desirable quality of having a positive body image and high self-esteem largely impacted the impressions made of an individual who was higher weight. Some of these traits rated to be more favourably for the target described as having positive body image and high self-esteem, such as being more warm/affectionate, outgoing, kind-hearted, and vibrant were sensible given the positive disposition of the individual. However, it was interesting to see traits like hard-working, self-control and several of the physical traits (e.g., attractive appearance and body shape, healthy, energetic) rated more favourably for the target described as having a positive body image compared to negative body image. Given the negative social evaluations typically seen for individuals with higher weight surrounding laziness and lacking self-control (Puhl & Brownell, 2001), it was interesting to see that even though both the positive and negative body image targets were described in the scenarios as overweight, there could be trait differences based on body image and self-esteem information. The present study shared similarities to Tompkins and colleagues (2009) who found women rated a woman target as more likeable when she engaged in positive body talk (e.g., spoke highly of her appearance) compared to when she spoke negatively about her body (e.g., engaged in fat talk). Although one study hypothesized a woman with higher weight who engaged in positive body talk would be rated as less likeable and less socially desirable, as she was going against the expected appearance norms, they found regardless of the woman's body size, engaging in positive body talk resulted in a more favourable impression with regards

to personality traits (Barwick et al., 2012). Therefore, just as positive body talk behaviour influenced the impression made, displaying positive body image cognitions and attitudes also created a more favourable impression in others' minds in the present study.

Additionally, it is worth noting for the positive body image and high self-esteem target, the rating scores for all 17 personality characteristics and 5 physical characteristics (all but the fitness-related characteristics) were above the mid-point on the rating scale.

Therefore, not only was the positive body image target (including high self-esteem) rated more favourably than the negative body image target (including low self-esteem) but they made an overall strong, favourable impression.

Informing people about an individual's body image (including high self-esteem) was influential in impression formation as evident when comparing the positive and negative body image targets to the control target (i.e., stable overweight with no body image information). The control target was rated less favourably compared to the target with positive body image as well as more favourably compared to the target with negative body image on several personality characteristics. Taking these findings one step further, this information demonstrates the potential to utilize body image information attitude expression for impression formation and a self-presentation strategy. The presence of body image and self-esteem information, both positive and negative, resulted in significantly different impressions when compared to the absence of body image information in the control target description. Although people's expressions of certain positive attitudes can generate the optimal effect when looking to convey a desirable impression (Leary, 1995), it appears the omission of negative attitudes can also be effective in impression formation.

For the physical characteristics, the target described as having a positive body image (including high self-esteem) was rated more favourably on eight out of the nine possible physical characteristics. The number of significant physical characteristics in the present study was consistent with previous research rating targets (Lindwall & Martin Ginis, 2006; Martin Ginis & Leary, 2006; Martin Ginis et al., 2003; Martin Ginis et al., 2000). However, it should be noted those studies altered information about exercise status, which may be more salient for physical characteristics. Hence, this finding highlights how impactful body image and self-esteem information were in the present study to influence the large number of physical impressions when the target's physical description remained constant. The target with a positive body image was rated more favourably on all but one of the physical characteristics than the target described as having a negative body image. This was important for two specific reasons. First, the physical description of the target in research question 2 remained exactly the same for all three targets. Thus, it was surprising to see all but one physical characteristic was significantly different. Second, the only physical characteristic that was not different was the targets' overweight status. Therefore, the physical differences (e.g., attractiveness, fitness, health) between the three target women was not a result of a perceived difference in their weight (i.e., perceiving one target to be higher weight), but rather a result of the body image and self-esteem information provided. Just as an overweight individual who was described as a regular exerciser had influenced the physical ratings of targets (i.e., rated to be just as good looking and sexually attractive as the underweight regular exerciser target; Martin Ginis & Leary, 2006), the present study provided additional evidence with body image information. These findings extend the work with positive

body talk that women find body acceptance (e.g., component of positive body image) more likeable than someone who is critical of their body (Barwick et al., 2012; Tompkins et al., 2009; Tucker et al., 2007). Even though a bias may exist against a woman with higher weight, solely based on her weight status (Puhl & Brownell, 2001), an inner positivity, such as having a positive body image and high self-esteem, could foster a more favourable impression when it comes to social judgments.

Limitations

There are some limitations to make note of in the current study. First, looking at the demographics of the participants, we only used a female target description. Thus, it is unknown whether personality and physical characteristic differences would be rated differently if different targets had been described (e.g., young adult men, adolescents or older adults). Second, the participants were all young adult females which could have influenced the impressions formed, and thus results cannot be generalized to other populations. In addition, the majority of participants were from kinesiology or physical education programs, therefore, predominantly educated in a health-focused environment. However, given that weight bias can exist in health care professionals (Schwartz et al., 2003), it is important to examine how individuals in health fields perceive individuals who are higher weight. With the target descriptions themselves, there were some limitations. First, with the weight trajectory scenarios, there was additional context with respect to weight change information. For example, there could have been confounding effects based on level of perceived control, as the weight loss trajectory indicated the target “decided” to lose weight whereas the weight gain trajectory was not matched for perceived control. Therefore, the results of the present study cannot provide causal effect

information as to what element of the manipulated information (i.e., the weight change or the level of perceived control) produced the impression. Along those lines, the body image target descriptions also included potential confounding information in addition to body image information. To amplify the manipulation, self-esteem information was also added into the body image descriptions (e.g., high self-esteem with positive body image information; low self-esteem with negative body image information). Thus, it is unclear as to whether the magnitude of significantly different personality and physical characteristics were strictly as a result of the body image information or a combination effect with the self-esteem information. Additionally, there were some limitations with the design of the present study. The lack of factorial design was a limitation of the present study. Therefore, conclusions cannot be made regarding the impact one manipulation had on the other (i.e., cannot directly compare the impression of weight trajectory targets vs. body image attitude targets). Another limitation could have been the influence of social desirability on participant responses, as awareness surrounding weight acceptance continues to grow and as a result, participants may have downplayed negative ratings of individuals who are higher weight to answer in a more socially desirable manner. Despite this possibility, negative social judgments still emerged. Lastly, although the scenarios were able to significantly alter the impression ratings of the target, it is unclear whether these impressions would occur in real life social interactions and not just through brief written descriptions with very limited information provided.

Implications

The present study adds to the existing literature on impression formation. Building off previous research emphasizing the positive social judgments for women who

talk positively about their body rather than using negative, fat talk (Barwick et al., 2012; Tompkins et al., 2009; Tucker et al., 2007), the present study extended this notion to include a preference for an overall positive character disposition (i.e., high self-esteem and positive body image). Therefore, this finding could be applied as an indirect self-presentational tactic for women. In particular, women with higher weight who commonly experience negative social judgments within social interactions (Greenleaf et al., 2004; Neumark-Sztainer, Story, & Harris, 1999) could potentially improve the quality of their interpersonal relations by exhibiting body positivity. For example, in order to convey an overall positive body image within interpersonal relations, women could: express feelings of body acceptance and appreciation in discussions about their body, with an emphasis on health and function; be critical of unrealistic media images and express how they have a broad concept of beauty; and listen to and take care of their body in a respectful way, such as engaging in intuitive eating and enjoyable movement (Tylka, 2011). It is worth noting, our suggestion that women with higher weight should exhibit a positive disposition to make a more favourable impression is not suggesting this should be the intended objective for developing positive body image. Given the numerous *intrapersonal* physical and psychological benefits to having a positive body image (Andrew et al., 2016), the focus should remain on reaffirming one's own self-acceptance and body positivity, aside from external evaluations from others. However, as the present study demonstrates, other people seem to admire others with a positive character disposition (including high self-esteem and positive body image) and form a favourable impression of that individual, even when described as someone with a higher body weight. Thus, a favourable impression from others based on body positivity may act as an

additional advantage. As one can only *attempt* to convey a certain impression (Lindwall & Martin Ginis, 2006), a favourable impression may not always transpire even with displaying a positive disposition. However, there appears to be little downside to someone exhibiting positive body image, regardless of how others form social judgments.

The findings from the present study reflect the growing focus on weight-inclusive health promotion approaches and media campaigns to promote body acceptance. These initiatives offer a more compassionate approach based on a social justice framework and educate people on the damaging effects of social judgments. Thus, a target described as someone who expresses overall positive body image (also including high self-esteem) could result in a more favourable impression of a person who is higher weight because of the heightened awareness surrounding weight-inclusive health programs. These approaches include programs such as Health at Every Size® which rejects the misconception that weight is a direct result from personal choices regarding health and promote body acceptance in all body sizes (Association for Size Diversity and Health, 2014). Although the present study provides *prospective* evidence, promotional strategies to raise awareness and educate people about weight-inclusive health promotion programs appear to be effective in altering social judgments. Taking the demographics of the present study into mind (e.g., young adults in health-related programs), the present study offers encouraging results for future weight-inclusive health approaches.

Future Directions

To expand upon the limitations of the current study, in relation to the design and analysis, future studies could refine the manipulated information within the weight trajectory and body image paragraph descriptions. For example, removing the

controllability aspect to weight trajectory information and removing the presence of self-esteem information to focus in the influence weight trajectory and body image information, respectively, could allow researchers to look more specifically at their effects on impression formation. As far as the analysis, future studies could implement a factorial design with the weight trajectory and body image paragraphs in order to make direct comparisons between the two types of scenarios. For example, is a woman described as on a weight gain trajectory with a positive body image rated differently on personality and physical characteristics than a woman described as on a weight stable or weight loss trajectory with a positive body image? Additional measures could be explored as well to examine their influence on impression formation, such as: fat acceptance; social desirability; weight history (e.g., weight cycling). To extend the current findings to a more real life scenario, future studies could examine whether an interaction with a confederate who exuded either a positive or negative body image could produce a different impression. As an added element, observing participant responses to the confederate would offer greater insight into self-presentational tactics and their reciprocal effects on others. Also, qualitative exploration is needed within this research area to uncover *why* some of these impression formation differences are underlying perceptions of others, especially with regards to weight. For example, it is unclear whether the differences in impression formation are a result of people actually perceiving the weight loss trajectory target as more likeable *or* a result of people feeling it is more socially acceptable to negatively evaluate the target on the weight gain trajectory?

Conclusions

Overall, the present study provided some significant contributions to impression formation research. Weight trajectory, not just weight status which had been primarily examined in previous studies, influenced the impression formed of a target. As predicted, the target on a weight loss trajectory was perceived more favourably on characteristics that aligned with weight assumptions (e.g., controllability, effort). However, there was very few perceived differences in the target described as stable overweight and the target described as overweight who had gained more weight. Although exploratory, this finding suggests a potential “threshold effect” may be in effect with regards to negative social judgments with weight. Most notably, the target described as having a positive body image (which included higher self-esteem) was perceived to have numerous positive personality and physical attributes – in fact the vast majority of characteristics were rated more positively than a target described as having a negative body image (with low self-esteem). Thus, within interpersonal relations it appears that women perceive a positive disposition as an admirable quality among other women as it resulted in a more favourable overall impression. It is worth noting that this favourable impression was present in women described as with higher body weight (i.e., overweight). Although more research is needed to identify specific factors influencing impression formation, the present study offers encouraging support for positive body image as a potential self-presentation tactic to improve interpersonal relations among individuals with higher weight.

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Chapter 5: General Discussion

This dissertation explored positive body image among young adult women. This program of work examined the effectiveness of positive body image as a cognitive processing schema when activated by appearance-related comments, extending this concept at higher and lower body weights, and its effectiveness in informing social judgments. In summary, in the first study, the frequency of positive appearance-related commentary indirectly impacted the effect felt from those compliments through body appreciation. In the second study, women's body image experiences with appearance-related commentary varied greatly over their weight history. The young women described mixed emotions resulting from appearance-related commentary by their friends, family and partner at both higher and lower body weights. Ultimately, the women recognized their mindset shaped their interpersonal experiences, especially when interpreting positive appearance-related commentary. In the third study, a woman described as higher weight who also had a positive body image (and high self-esteem) was rated more favourably with regards to several personality and physical characteristics compared to a woman who was said to be higher weight with a negative body image (and low self-esteem). Overall, these studies show the usefulness of women possessing positive body image from both an *intrapersonal* and *interpersonal* standpoint.

To date, body appreciation has been associated with several positive psychological constructs (e.g., self-esteem, adaptive coping, life satisfaction, and optimism; Avalos et al., 2005; Dalley & Vidal, 2013; Swami, Stieger, Haubner, & Voracek, 2008; Tylka & Kroon Van Diest, 2013) and health behaviours (e.g., intuitive eating, sun protection and cancer screening; Andrew, Tiggemann, & Clark, 2016;

Augustus-Horvath & Tylka, 2011; Avalos & Tylka, 2006). In addition, previous studies have utilized body appreciation as a processing mechanism and found it had protective effects from media exposure (Andrew, Tiggemann, & Clark, 2015; Halliwell, 2013) as well as fostering intuitive eating behaviours (Avalos & Tylka, 2006). The present dissertation extends this work to add support for body appreciation operating in a cognitive-processing capacity with regards to filtering appearance-related information in interpersonal relations.

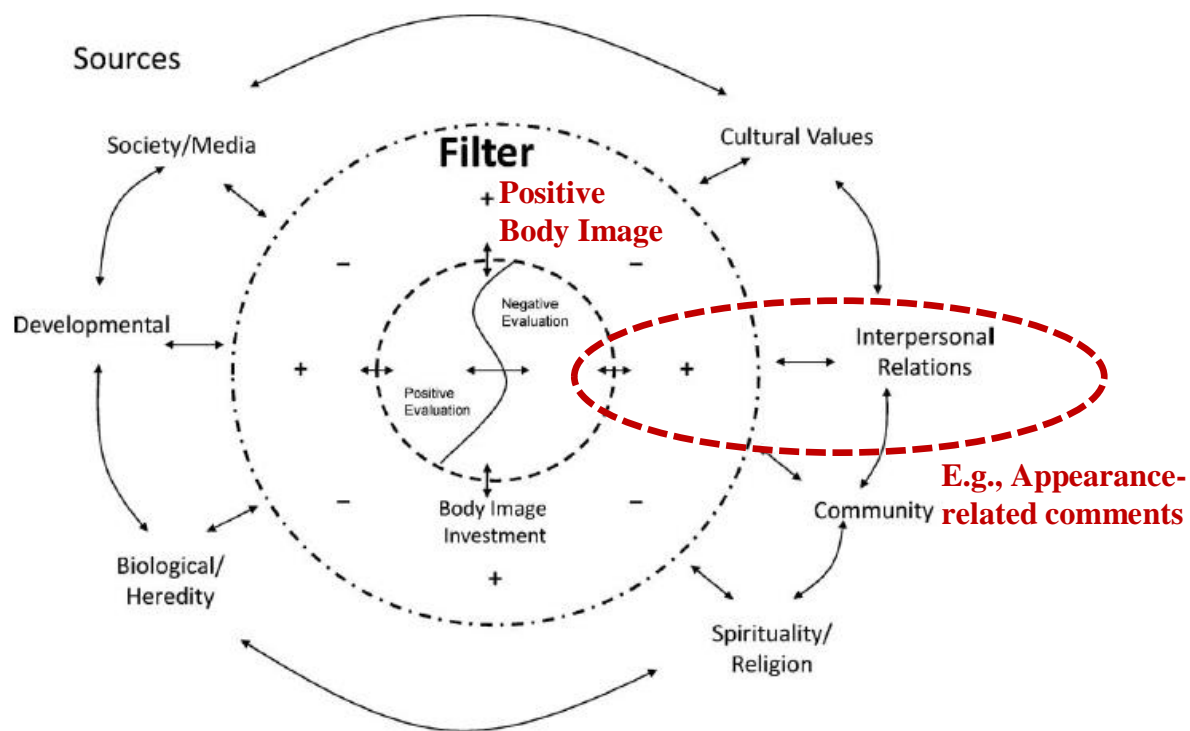


Figure 5.1. Adapted from holistic body image model created by Wood-Barcalow et al., (2010) to represent an all-inclusive approach to body image development. Permission from publisher for reuse in a thesis/dissertation from Elsevier, license #4095461390601. *Note.* Red text indicates adaptations based on present dissertation.

In studies 1 and 2, positive body image was explored in relation to appearance-related commentary. Together, through a quantitative and qualitative approach, the findings offered complimentary support for one another as positive body image

characteristics (i.e., body appreciation, body acceptance, respectively) operated as a filter for appearance-related commentary. These results added support to the holistic body image model (Figure 5.1; Adapted from Wood-Barcalow, Tylka, & Augustus-Horvath, 2010), specifically with regards to how the composition of the filter structure can influence how appearance-related comments are received. To date, this model had not been empirically tested. Study 1 from the present dissertation provided preliminary support to suggest that appearance compliments indirectly impact the effect experienced from those compliments through body appreciation. As the women explained in a study by Wood-Barcalow and colleagues (2010), their positive body image contributed to their ability to filter body-related information as they were able to block out negative messages and internalize positive messages that helped preserve their positive body image. The indirect effects found in study 1 correspond with what those women described with preserving their positive body image. Appearance compliments triggered body appreciation as the cognitive processing filter to then facilitate (or preserve) a positive effect from appearance compliments. Again, just as the women described in Wood-Barcalow and colleagues (2010), the women in study 2 similarly spoke about how their transition to more positive body image started with a cognitive shift in their thinking towards their body. It was their shift in thinking to become more accepting of their body, not becoming a lower weight, that helped the women in study 2 facilitate and maintain positive outcomes from receiving positive appearance-related comments.

One of the most interesting findings from this dissertation was the process of reciprocity when it came to body image experiences for women in study 2. Not only did various sources impact their body image development, but their body image also shaped

how they interacted with these sources within their environment. As Tylka (2011) summarized, women's daily interactions with others shape their body image but their body image also shapes how they approach their daily interactions. With appearance-related commentary, the women in study 2 remarked how they only internalized comments (i.e., either positive or negative) that matched with their body image at the time. For example, the women were more likely to accept positive appearance-related commentary when they had more body acceptance (i.e., component of positive body image) as it matched with how they already viewed themselves (i.e., more favourable opinions of self). This concept of reciprocity was also consistent with one of the processes in the holistic body image model (Wood-Barcalow et al., 2010).

The takeaway from studies 1 and 2 was that positive body image, including body appreciation and body acceptance, seem to be effective in facilitating *intrapersonal* benefits for the individual who possesses positive body image. Study 3 focused on extending these benefits to an *interpersonal* context to see if there were advantages to having a positive body image from an impression formation standpoint. The results did in fact demonstrate that with social judgments, a woman described as overweight who has a positive body image (including high self-esteem) was rated more favourably on several personality and physical characteristics compared to a woman with the exact same physical description but had negative body image (including low self-esteem). Thus, positive body image was recognized as an admirable quality as the ratings reflected an overall positive impression. Again, these findings highlight the reciprocal nature with body image. More specifically, a person's body image can shape how they interact or impact their surroundings; in this case, how their surroundings (i.e., people) evaluate

them. As mentioned previously, the impressions other people form about a person influence how they treat that individual (Leary, 1995). So, if a person holds a more favourable impression of someone, they would likely treat that individual in a more positive manner. Therefore, in addition to the primary *intrapersonal* advantages that positive body image provides the individual, a secondary benefit could be that having a positive body image fosters a more favourable impression from others within *interpersonal* relations.

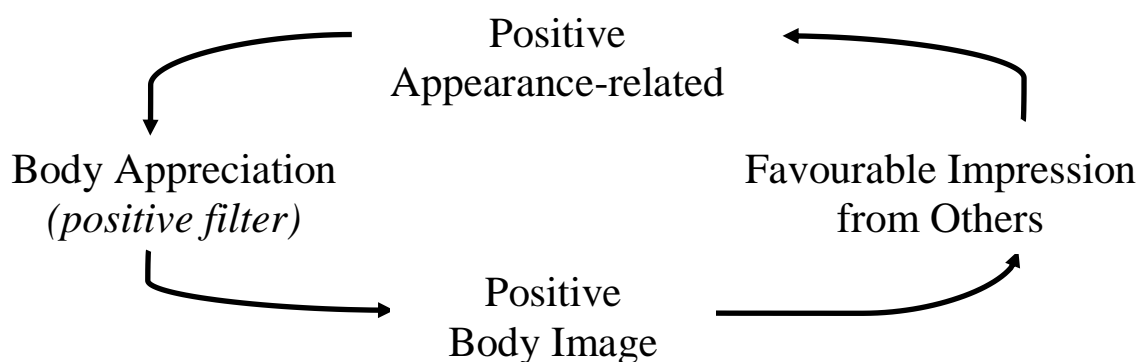


Figure 5.2. Positive feedback loop illustrating the link between all three studies' findings.

Together, findings from all three studies suggest a positive feedback loop potentially can be created to help explain *how* this process may work specifically with interpersonal relations (see Figure 5.2). A positive feedback loop builds off the reciprocal nature demonstrated within this dissertation regarding positive body image facilitating positive effects. To start, fostering body appreciation as an information-processing filter appears to be the first step (as depicted on the far-left side of Figure 5.2). Moving counter-clockwise from body appreciation in Figure 5.2, this adaptive filter may help women develop more overall positive body image. Next, as positive body image was found in study 3 to produce a more favourable impression on other people, this would

likely influence the type of appearance-related commentary a person provides to women within their interpersonal relations. Lastly, because of their more positively-frame filter (e.g., having body appreciation and body acceptance), women may interpret the appearance-related commentary they receive from others more positively and this positive feedback loop will likely continue. Within this cycle, it is important to clarify that positive body image, including body appreciation, as a cognitive-processing filter is not perfect (Tylka & Wood-Barcalow, 2015). It is not about an inability to process or a denial of *any* potential negative appearance-related information but rather it is about, “accepting information that is consistent with positive body image while rejecting messages that could endanger it” (p.6). As body appreciation includes rejecting unrealistic appearance ideals but also holding positive evaluations of one’s own body (Avalos, Tylka, & Wood-Barcalow, 2005), women who have a high level of body appreciation may not dwell on any type of external information (negative or positive). Body appreciation is not the same as body satisfaction and in fact, “is a way of valuing one’s body and orientating cognitive processing to protect and promote a positive view of the body.” (Halliwell, 2013, p. 509). With that in mind, accepting appearance compliments does not *produce* body appreciation but rather accepting those compliments *maintains* an existing positive evaluation of the body.

Contributions to the literature

This dissertation extended the existing appearance-related commentary literature. To date, most research has examined *negative* appearance-related commentary and in addition, its relationship to *negative* body image characteristics (Cash, 1995; Eisenberg, Neumark-Sztainer, & Story, 2003; Fabian & Thompson, 1989; Herbozo, & Thompson,

2006; McLaren, Kuh, Hardy, & Gauvin, 2004). This approach only explores one side of the story and the limited research on positive appearance-related commentary has shown confounding effects, as a positive outcome does not always ensue (Calogero, Herbozo, & Thompson, 2009; Fea & Brannon, 2006; Herbozo & Thompson, 2006). Therefore, findings from the current dissertation extend the *positive* appearance-related commentary literature to an understudied perspective with its associations to *positive* body image, not just *negative* body image. Body appreciation, a component of positive body image, indirectly explained the positive effect felt from appearance compliments. However, more research is needed on positive body image and positive appearance-related commentary to build off the current dissertation findings.

As a newer approach in this dissertation, body appreciation was operationalized as a cognitive processing style and not simply as an outcome attitude variable (Webb, Ajibade, & Robinson, 2014). Specifically, the present thesis explored the role of positive body image in processing appearance-related comments (i.e., how comments were interpreted to produce an effect). Previous research has identified factors that predict body appreciation (Andrew et al., 2016), which include perceived body acceptance by others and self-compassion, appearance media consumption, self-objectification, social comparison, and thin-ideal idealization. This dissertation moved beyond simply determining predictors of body appreciation and sought to explore *how* body appreciation can be utilized to effectively process appearance-related information. Halliwell (2013) and Andrew and colleagues (2015) demonstrated how a protective effect against appearance-related media existed for those women with high body appreciation. The results from studies 1 and 2 conceptually broadened this notion to provide support for

positive body image constructs (i.e., body appreciation and body acceptance) working to promote or maintain a positive effect from body-related information (i.e., appearance-related comments). In addition, this dissertation was also able to add greater insight into how body image experiences and responses to appearance-related commentary can be altered both *with* and *without* weight loss.

To date, appearance-related commentary and the body image literature have predominantly been researched using cross-sectional designs. The present study added a different layer by exploring the relationship between appearance-related commentary and body image within the *same* individual as their body weight changed. The existing literature is predominantly based on quantitative research and has provided mixed findings with regards to body image and body weight. Some studies have found individuals who are overweight or obese to have greater body image concerns than those who are not overweight (Latner & Wilson, 2011; Schwartz & Brownell, 2004), whereas other studies have found no relationship between a woman's body mass index and her body image distress (Matz, Foster, Faith, & Wadden, 2002; Wilfley, Schwartz, Spurrell, & Fairburn, 2000). The qualitative results from study 2 added richer context to the complexity that currently exists between body image and weight. Considering the variability in body image experiences that several women discussed within themselves, it is not surprising there has been such mixed evidence when looking at body image and weight across individuals. As discussed earlier, the results from study 2 provided support for the holistic body image model (Wood-Barcalow et al., 2010) and reciprocity with positive body image, specifically (Tylka, 2011). The women discussed how actively focusing on developing positive body image characteristics (i.e., body acceptance) altered

their interpretations of appearance-related commentary. For example, one woman spoke about how her body positivity contributed to her active, “lead by example”, lifestyle and did not allow her higher weight to deter her from engaging in physical activity. Thus, the present dissertation emphasizes the importance for future research to continue this exploration, looking at the diversity of body image experiences instead of trying to narrowly simplify body image at specific weight statuses. More specifically, the possibility for positive body image to be present in women of both lower and higher weights.

Lastly, the findings from study 3 added to the impression formation and body image literature. To date, other studies have successfully manipulated impressions based on weight status (Blaine, DiBlasi, & Conner, 2002; Mattingly, Stambush, & Hill, 2009), exercise status (Martin, Sinden, & Fleming, 2000; Martin Ginis, Latimer, & Jung, 2003) and positive body-talk (Barwick, Bazzini, Martz, Rocheleau, & Curtin, 2012; Tompkins, Martz, Rocheleau, & Bazzini, 2009) using both written descriptions and photographs. Positive body image (including high self-esteem) can now be added to this list that informs social judgments of an individual. In fact, the number of significantly different characteristics between the positive body image and negative body image target descriptions was overwhelming, including 15 of the 17 personality and 8 out of the 9 physical characteristics. The effect sizes for those characteristic differences were also large (Cohen, 1992), emphasizing how influential positive body image (including high self-esteem) was on impression formation. Making a more favourable impression on others as a result of having a positive body image should not be the driving factor for someone to develop positive body image. However, it may provide useful ancillary

advantages as a favourable impression could potentially influence how other people interact with that person.

Practical applications

Positive body image, including body appreciation and body acceptance, were effective at processing appearance-related information from others. Therefore, body image intervention programs should emphasize how potentially important positive body image can be for young adult women when processing any type of body-related information. Albertson and colleagues (2015) suggest body appreciation may be fostered through self-compassion training, educating women on how to become less critical of their body and more mindful of body diversity. Body appreciation encompasses holding favourable opinions of one's own body, accepting the body, engaging in healthy behaviours out of respect and care for the body, and rejecting unrealistic media portrayals of "ideal" bodies (Avalos, Tylka, & Wood-Barcalow, 2005). The findings from the present dissertation can be used to clarify misconceptions that women may have about accepting or feeling good about appearance compliments. As one of the women remarked in study 2, she thought women were not *supposed to* accept or acknowledge appearance compliments from others but also joked about the absurdity of this alleged rule. Therefore, education programs for young girls and women regarding how to process appearance-related information should utilize the findings from the present study. Body image intervention programs have likely focused on how to deal with negative comments, consistent with existing literature determining how to prevent negative body image. However, educating young girls and women on how to manage appearance compliments is equally important. Positive body image facilitated a positive effect, as accepting

appearance compliments was simply acknowledging consistent information with how someone already viewed themselves (i.e., favourable opinion of one's own body; Avalos et al., 2005).

The key practical outcome from this dissertation is the active role women can play in their body image development and interpersonal relations. Negative body image characteristics often are conceptualized as very passive, as thoughts and emotions that happen *to* an individual based on biological or environmental factors (e.g., society, media, culture, interpersonal experiences). However, research within the positive body image literature, including the present dissertation, has started to acknowledge the reciprocal nature of body image (Tylka, 2011). More specifically, women can actively construct their body image and as a result can influence how they interact with their dynamic environment. The findings from this dissertation are consistent with this notion, demonstrating how women can intentionally shape their experiences by shifting their mindset to become more positive. For example, a woman who has formed an appreciation for the muscular strength in her legs and what that strength allows her to accomplish will likely be able to reject or reframe a negative comment she receives from someone else about the size of her legs as it is inconsistent to her own self perceptions. Overall, positive body image does not appear to be something that naturally transpires, or innately surfaces after weight loss, but rather can be actively constructed at any body size. The active component to positive body image construction is important moving forward with weight-inclusive programs like Health at Every Size®. Health at Every Size® is a program designed to improve health behaviours for all individuals, not just individuals who are higher weight. The tenets of the program include encouraging body acceptance

(regardless of weight or shape), intuitive eating, and active embodiment (Bacon & Aphramor, 2011). However, there is a misconception that these programs promote “giving up” or a sense of “complacency” with eating and physical activity behaviours. In fact, body acceptance programs, like Health at Every Size®, are simply re-allocating efforts to more adaptive thinking and behaviours which are focused on health promotion rather than weight loss. Positive body image characteristics, like body acceptance and appreciation, cater to the dynamic nature of appearance, body shape and function and provide a flexible and compassionate approach to manage changes to the physical body. Body image improvements that occur with weight loss are often transient (Latner & Wilson, 2011; Puhl & Latner, 2007; Schwartz & Brownell, 2004) and thus, a shift towards a more positive mindset offers more opportunity for stable improvements to global body image, at any body size.

Strengths

In addition to the literature contributions, the present dissertation had some research design strengths as well. First, a multi methods research approach was used to provide complimentary evidence specifically with regards to studies 1 and 2. Using both quantitative (studies 1 and 3) and qualitative (study 2) analyses within this dissertation allowed for a richer understanding of the overarching program of work looking at the effectiveness of positive body image. Second, the present study incorporated weight trajectory as a novel approach to further explore the complex relationship between body weight and body image. Allowing participants to subjectively report their own weight trajectory, as opposed to calculating an objective body mass index score, was used to emphasize how important the *perceptive* nature of body image is with regards to weight

and weight changes over time. The qualitative exploration of weight trajectory within study 2 provided beneficial insight into the individualistic nature of this relationship revealing the complexity between body weight and body image *within* an individual. Lastly, incorporating an experimental design was a strength to the present dissertation. In keeping with the overarching exploration of the value of positive body image, study 3 utilized positive body image (including high self-esteem) to influence social judgments.

Limitations

The limitations for each of the three studies have been outlined in their respective chapters. Looking at the collective work, there are some limitations to address. First, the sample characteristics of the population in this dissertation are limited. As all three studies focused on body image among young adult women, it is unknown whether these findings with positive body image are unique to this population or may be present in other populations, for example, young adult men, adolescents, middle-aged or older adults. Also, the sample was predominantly Caucasian and university-educated which further limits the generalizability of the dissertation findings. Second, given the novelty to some of the topics investigated within this dissertation (e.g., weight trajectory, relationship between positive body image and positive appearance-related commentary, positive body image in impression formation) research questions and hypotheses were exploratory in nature, being more conceptually-driven from previous research studies and a preliminary model of positive body image. Third, the measures used throughout this dissertation provided some limitations. A self-reported weight trajectory measure was specifically created for this dissertation, but, it was challenging to relate a novel approach to understanding the influence of weight (i.e., weight trajectory) to existing literature that

has predominantly used an objective measure (i.e., body mass index). Therefore, the findings with weight trajectory are more of a starting point that require further exploration. Lastly, the procedures and analyses used within the present dissertation were potential limitations to the research. For example, in study 3 in order to amplify the potential for manipulating the impression formed, additional character information was added about the described target's self-esteem along with the body image information. Therefore, the additional information may be confounding the effects and further research is needed to tease out which aspects of the manipulation is informing the rater's social judgments of that described person.

Future Directions

Along with the specific limitations of each study, future directions have also been outlined in detail for each manuscript. Overall, future research should explore other aspects of positive body image in relation to processing appearance-related commentary. One component that could be explored is body image flexibility, which represents one's ability to openly and fully experience negative body image cognitions or emotions as well engaging in value-consistent behaviours (Sandoz et al., 2013). Perhaps body image flexibility may work similarly to body appreciation that indirectly impacted the effect felt from appearance compliments. For example, a person could receive a negative appearance-related comment and momentarily feel a negative emotion but is quickly able to reframe the situation to a more positive one. Other potential positive body image characteristics that could be explored in association with appearance-related commentary are unconditional acceptance from others or intuitive eating behaviour. In addition, to address the limitations with weight trajectory in the current studies, future research could

examine the impact of weight cycling. Individuals who self-classify themselves as weight cyclers, who go through periods of repeated weight loss and regain, are more likely to report body dissatisfaction and lower self-esteem compared to those who are not weight cyclers (Friedman, Schwartz, & Brownell, 1998). In addition, a history of weight cycling strengthens the relationship between greater body dissatisfaction and disordered eating (Juarascio, Perone, & Timko, 2011). Therefore, future studies may want to explore the relationship between weight cycling, not just weight loss, and appearance-related commentary as weight history may have a greater impact than one's current weight or weight trajectory.

Dissertation Reflection

As this dissertation used a qualitative research approach in study 2, I felt it was necessary to include an overall reflexivity section. Reflexivity is a process by which a researcher identifies potential ways in which one's own positionality can impact the research, for example the researcher's: social identity; power; personal experiences with the topic; and relationship with participants (Daley, 2007; Jones, Torres, & Arminio, 2014). Within qualitative research, reflecting on the research process is a common and useful practice (Daley, 2007).

Over the course of completing my dissertation, I have evolved as a researcher. My experiences and positionality have shaped this research. One of the most influential developments was the paradigm shift I experienced within my dissertation. When I began my first study, I was operating under the post-positivist paradigm. The principles of this paradigm include: knowledge as something to be discovered; seeking a universal truth; remaining value neutral; and remaining distant or objective with participants (Creswell,

2013). As I progressed into my second study, a qualitative exploration of body image experiences among women who had lost weight, I began to feel tension within my research values and role as the researcher. Ultimately, I experienced a shift to operating under a constructivist paradigm, whereby knowledge is co-constructed with the participant and the researcher, reality is formed through interactions, there are multiple truths, and the researcher is actively engaged as a facilitator with participants (Crotty, 1998). This paradigm shift relieved the tension I was feeling and better represented my research values moving forward. As Longhurst (2011) explained in her autobiographical research exploring the politics of weight loss, “the selves [personal and research] are not separable” (p. 875). An example of this tension manifested in the data analysis process of bracketing, which involves the researcher setting aside her own experiences with the phenomenon so as to not “interfere” with the collection or interpretation of participants’ data. As I found myself aligning more with the constructivist paradigm, I was no longer comfortable with setting aside my personal experiences. Instead, I was able to use my personal experiences with the phenomenon and knowledge about the topic as an asset to the research project, adding richness to interview discussions and depth to interpretations of the data.

With my growing belief in the Health at Every Size® principles, I began to think critically about my measurement techniques, especially surrounding how I measured body weight in my dissertation. In study 1, to keep consistent with previous literature, I chose to take an objective measure of weight. All participants were asked to step on the scale in the laboratory after completing their questionnaire to obtain an objective measure of their body weight (lbs). Not only were the participants uncomfortable with this

experience, as some individuals declined to step on the scale and the majority of women were hesitant to be weighed, I was also uncomfortable with creating this anxiety for my participants. Especially since body mass index has had such inconsistent or non-existent associations with body image variables, putting participants through this anxiety-inducing event did not seem appropriate. As a result, I decided not to objectively measure body weight for my third study.

There was another critical moment along the way that helped inform my dissertation. While entering the data for the Anti-Fat Attitudes questionnaire I used in study 3, I noticed a pattern in the participant responses between the different subscales. The pattern centered around how participants rated their anti-fat attitudes about other people compared to their views about themselves. It was very common for participants to rate their anti-fat attitudes regarding other people on the lower end of the rating scale (i.e., held less bias towards other people). However, when rating the negative outcomes of becoming fat themselves (i.e., fear of fat items) the ratings tended to jump to the high end of the rating scale (i.e., held more bias towards themselves). This pattern occurred in the majority of participants' data and prompted me to question whether this could be a critical piece to weight stigma research. How could participants so strongly disagree with holding anti-fat attitudes about other people but were quick to stigmatize themselves based on their own weight or the fear of becoming overweight? This observation has sparked future research ideas and potentially a new way to bridge the research areas of body acceptance with weight bias reduction.

Moving forward within weight stigma and body image research, I recognize how my current physical body may present certain challenges within weight bias and fat

acceptance research. I am aware of the thin privileges my current physical body carries. Although I have previous experience with being in a heavier body when I was younger, I do not have first-hand experience of what it is like to live in a fat body as a young adult woman. I remained mindful of this throughout my dissertation, letting my shared experiences with my participants inform my analysis but understanding no two experiences are alike and ensured the unique experiences my participants described were represented in the data.

Conclusions

Overall, this dissertation provided deeper insight into positive body image and its *intrapersonal* and *interpersonal* advantages. In study 1, appearance compliments triggered body appreciation as the cognitive processing mechanism which in turn, impacted the effect felt from those compliments. In study 2, women described in their interviews how positive body image (i.e., body acceptance) shaped how they interpreted appearance-related commentary. Despite their hopes that losing weight would improve their reactions to comments, the women explained how shifting their mindset to become more body positive (i.e., body acceptance) enhanced their overall daily interactions, including processing appearance compliments. Building upon these *intrapersonal* benefits to positive body image, study 3 expanded this notion to demonstrate the *interpersonal* advantages to having a positive body image. Even with the same physical narrative, that included describing both of them as overweight, a woman described as having positive body image (including high self-esteem) was rated more favourably on several personality and physical characteristics compared to a woman who was described as having a negative body image (including low self-esteem). Therefore, making a more

favourable impression on others may be an added bonus to having positive body image, although it should not be the primary reason for developing positive body image. Overall, the present dissertation provided novel findings with regards to positive appearance-related commentary and positive body image. In addition, the importance of fostering a positive body image was apparent in all three studies and offers an encouraging focal point for future research studies and body image program design.

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Appendices

Study 1 Ethics Clearance



Brock University
Research Ethics Office
Tel: 905-688-5550 ext. 3035
Email: reb@brocku.ca

Social Science Research Ethics Board

Certificate of Ethics Clearance for Human Participant Research

DATE: 12/18/2014
PRINCIPAL INVESTIGATOR: GAMMAGE, Kimberley - Kinesiology
FILE: 14-105 - GAMMAGE
TYPE: Ph. D. STUDENT: Lindsay Cline
SUPERVISOR: Kimberley Gammage
TITLE: Appearance-Related Commentary and Positive Body Image

ETHICS CLEARANCE GRANTED

Type of Clearance: NEW

Expiry Date: 12/31/2015

The Brock University Social Science Research Ethics Board has reviewed the above named research proposal and considers the procedures, as described by the applicant, to conform to the University's ethical standards and the Tri-Council Policy Statement. Clearance granted from 12/18/2014 to 12/31/2015.

The Tri-Council Policy Statement requires that ongoing research be monitored by, at a minimum, an annual report. Should your project extend beyond the expiry date, you are required to submit a Renewal form before 12/31/2015. Continued clearance is contingent on timely submission of reports.

To comply with the Tri-Council Policy Statement, you must also submit a final report upon completion of your project. All report forms can be found on the Research Ethics web page at <http://www.brocku.ca/research/policies-and-forms/research-forms>.

In addition, throughout your research, you must report promptly to the REB:

- a) Changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
- b) All adverse and/or unanticipated experiences or events that may have real or potential unfavourable implications for participants;
- c) New information that may adversely affect the safety of the participants or the conduct of the study;
- d) Any changes in your source of funding or new funding to a previously unfunded project.

We wish you success with your research.

Approved:

Jan Frijters, Chair
Social Science Research Ethics Board

Note: Brock University is accountable for the research carried out in its own jurisdiction or under its auspices and may refuse certain research even though the REB has found it ethically acceptable.

If research participants are in the care of a health facility, at a school, or other institution or community organization, it is the responsibility of the Principal Investigator to ensure that the ethical guidelines and clearance of those facilities or institutions are obtained and filed with the REB prior to the initiation of research at that site.

Study 1 Materials

Demographic Information

Age: _____

Race: _____

Year in School: _____

Major: _____

Height: _____

Weight: _____

Have you ever thought you have had a clinical eating disorder? _____

Have you ever been diagnosed with a clinical eating disorder? _____

At some point in your life, have you attempted to lose weight? _____

Which of the following statements best describes you? Please circle ONE statement.

(a) Compared to one year ago, I currently **weigh less** than I did

If so...roughly how much less do you weigh _____

(b) Compared to one year ago, I currently **weight about the same** as I did

(c) Compared to one year ago, I currently **weigh more** than I did

If so...roughly how much more do you weigh _____

Objective Measures:

Height: _____

Weight: _____

BMI calculation: _____

BAS

© Dr. Tracey Tylka, 2006

Instructions: For each item, please circle the number that best characterizes your attitudes or behaviours.

	1 Never	2 Seldom	3 Sometimes	4 Often	5 Always
1. I respect my body.	1	2	3	4	5
2. I feel good about my body.	1	2	3	4	5
3. On the whole, I am satisfied with my body.	1	2	3	4	5
4. Despite its flaws, I accept my body for what it is.	1	2	3	4	5
5. I feel that my body has at least some good qualities.	1	2	3	4	5
6. I take a positive attitude toward my body.	1	2	3	4	5
7. I am attentive to my body's needs.	1	2	3	4	5
8. My self-worth is independent of my body shape or weight.	1	2	3	4	5
9. I do not focus a lot of energy being concerned with my body shape or weight.	1	2	3	4	5
10. My feelings toward my body are positive, for the most part.	1	2	3	4	5
11. I engage in healthy behaviours to take care of my body.	1	2	3	4	5
12. I do not allow unrealistically thin images of women presented in the media to affect my attitudes toward my body.	1	2	3	4	5
13. Despite its imperfections, I still like my body.	1	2	3	4	5

VCOPAS

Sometimes, people say things that affect how we feel and think about our appearance. The following is a list of comments that may have been made about you. Please read each item and rate how often you think you have been the recipient of such a comment or similar comment (using the scale provided, never to always). If you rate an item as 1, then go directly to the next item. However, if you rate an item as 2, 3, 4, or 5, please also rate how that comment made you feel (using the scale provided, very positive to very negative). Rate the items based on your exposure to the following comments within the last two years.

1. Your outfit looks great on you.	1	2	3	4	5
	Never		Sometimes		Always
1a. How did this comment make you feel?	1	2	3	4	5
	Very Positive		Neutral		Very Negative
2. You need to start watching what you eat.	1	2	3	4	5
	Never		Sometimes		Always
2a. How did this comment make you feel?	1	2	3	4	5
	Very Positive		Neutral		Very Negative
3. You are pretty.	1	2	3	4	5
	Never		Sometimes		Always
3a. How did this comment make you feel?	1	2	3	4	5
	Very Positive		Neutral		Very Negative
4. I wish I had a body like yours.	1	2	3	4	5
	Never		Sometimes		Always
4a. How did this comment make you feel?	1	2	3	4	5
	Very Positive		Neutral		Very Negative
5. You've gained weight.	1	2	3	4	5
	Never		Sometimes		Always
5a. How did this comment make you feel?	1	2	3	4	5
	Very Positive		Neutral		Very Negative
6. You are in great shape.	1	2	3	4	5
	Never		Sometimes		Always
6a. How did this comment make you feel?	1	2	3	4	5
	Very Positive		Neutral		Very Negative
7. Don't you think you've eaten enough already?	1	2	3	4	5
	Never		Sometimes		Always
7a. How did this comment make you feel?	1	2	3	4	5
	Very Positive		Neutral		Very Negative
8. You're looking kind of skinny.	1	2	3	4	5
	Never		Sometimes		Always
8a. How did this comment make you feel?	1	2	3	4	5
	Very Positive		Neutral		Very Negative

9. Your facial skin looks good.	1	2	3	4	5
	Never		Sometimes		Always
9a. How did this comment make you feel?	1	2	3	4	5
	Very Positive		Neutral		Very Negative
10. You shouldn't eat so late at night.	1	2	3	4	5
	Never		Sometimes		Always
10a. How did this comment make you feel?	1	2	3	4	5
	Very Positive		Neutral		Very Negative
11. You have pretty eyes.	1	2	3	4	5
	Never		Sometimes		Always
11a. How did this comment make you feel?	1	2	3	4	5
	Very Positive		Neutral		Very Negative
12. You need to start exercising to lose weight.	1	2	3	4	5
	Never		Sometimes		Always
12a. How did this comment make you feel?	1	2	3	4	5
	Very Positive		Neutral		Very Negative
13. You have nice abs (abdominals).	1	2	3	4	5
	Never		Sometimes		Always
13a. How did this comment make you feel?	1	2	3	4	5
	Very Positive		Neutral		Very Negative
14. Have you considered going on a diet?	1	2	3	4	5
	Never		Sometimes		Always
14a. How did this comment make you feel?	1	2	3	4	5
	Very Positive		Neutral		Very Negative
15. You have a beautiful smile.	1	2	3	4	5
	Never		Sometimes		Always
15a. How did this comment make you feel?	1	2	3	4	5
	Very Positive		Neutral		Very Negative
16. Your outfit makes you look fat.	1	2	3	4	5
	Never		Sometimes		Always
16a. How did this comment make you feel?	1	2	3	4	5
	Very Positive		Neutral		Very Negative
17. I really like how those jeans fit you.	1	2	3	4	5
	Never		Sometimes		Always
17a. How did this comment make you feel?	1	2	3	4	5
	Very Positive		Neutral		Very Negative
18. Are you sure you want to eat such fattening foods?	1	2	3	4	5
	Never		Sometimes		Always
18a. How did this comment make you feel?	1	2	3	4	5
	Very Positive		Neutral		Very Negative
19. Have you gained weight?	1	2	3	4	5

	Never		Sometimes		Always
19a. How did this comment make you feel?	1	2	3	4	5
	Very Positive		Neutral		Very Negative
20. Your hair looks really good.	1	2	3	4	5
	Never		Sometimes		Always
20a. How did this comment make you feel?	1	2	3	4	5
	Very Positive		Neutral		Very Negative
21. You have a nice body.	1	2	3	4	5
	Never		Sometimes		Always
21a. How did this comment make you feel?	1	2	3	4	5
	Very Positive		Neutral		Very Negative

BICSI

In the course of everyday life, there are situations and events that occur which can negatively affect our body image. These situations and events are called body image threats or challenges, because they threaten or challenge our ability to feel okay about our looks. People do lots of different things to cope or deal with these challenges or threats. Listed below are some of the ways that people may try to cope with body image threats or challenges. For each item, think about how much it is characteristic of how you usually cope or would probably cope with an event or situation that poses a threat or challenge to your body image feelings.

Indicate how well each way of coping describes what you actually do or would do. There are no right or wrong answers. It doesn't matter how helpful or unhelpful your ways of coping are. Don't answer based on how you wish you usually reacted. Just be completely truthful.

	Definitely Not Like Me	Mostly Not Like Me	Mostly Like Me	Definitely Like Me
1. I do something to try to look more attractive.	1	2	3	4
2. I spend extra time trying to fix what I don't like about my looks.	1	2	3	4
3. I think about what I should do to change my looks.	1	2	3	4
4. I compare my appearance to that of physically attractive people.	1	2	3	4
5. I make a special effort to hide or "cover up" what's troublesome about my looks.	1	2	3	4
6. I make a special effort to look my best.	1	2	3	4
7. I think about how I could "cover up" what's troublesome about my looks.	1	2	3	4
8. I fantasize about looking different.	1	2	3	4
9. I spend more time in front of the mirror.	1	2	3	4
10. I seek reassurance about my looks from other people.	1	2	3	4
11. I remind myself that I will feel better after awhile.	1	2	3	4
12. I tell myself that I am probably just overreacting to the situation.	1	2	3	4

13. I tell myself that the situation will pass.	1	2	3	4
14. I tell myself that I probably look better than I feel that I do.	1	2	3	4
15. I remind myself of my good qualities.	1	2	3	4
16. I try to figure out why I am challenged or threatened by the situation.	1	2	3	4
17. I tell myself that there are more important things than what I look like.	1	2	3	4
18. I tell myself that I'm just being irrational about things.	1	2	3	4
19. I tell myself that the situation is not that important.	1	2	3	4
20. I react by being especially patient with myself.	1	2	3	4
21. I consciously do something that might make me feel good about myself as a person.	1	2	3	4
22. I make no attempt to cope or deal with the situation.	1	2	3	4
23. I try to ignore the situation and my feelings.	1	2	3	4
24. I react by overeating.	1	2	3	4
25. I try to tune out my thoughts and feelings.	1	2	3	4
26. I withdraw and interact less with others.	1	2	3	4
27. I avoid looking at myself in the mirror.	1	2	3	4
28. I eat something to help me deal with the situation.	1	2	3	4
29. I tell myself that I am helpless to do anything about the situation.	1	2	3	4

Debrief Form

Brock University, Faculty of Applied Health Sciences

Title of Study: Appearance-Related Commentary and Body Image
Principal Researcher: Dr. Kimberley Gammage, Associate Professor, Kinesiology,
 Brock University
Principal Student Investigator: Lindsay Cline, PhD Candidate, Applied Health Sciences,
 Brock University

Thank you for participating in our study. In this study, we were looking at the relationship between appearance-related commentary and positive body image characteristics. Appearance commentary is any verbal feedback, either positive or negative in nature, an individual receives from others regarding his/her physical appearance, including facial characteristics, body weight, and other physical attributes [Stormer, S., & Thompson, J. K. (1996). Explanations of body image disturbance: A test of maturational status, negative verbal commentary, social comparison, and sociocultural hypotheses. *International Journal of Eating Disorders*, 19, 193-202.]. We were specifically interested to see if there was a relationship between the amount of positive appearance-related commentary one receives and their positive body image characteristics. Additionally, we were looking to see if positive body image characteristics could predict how an individual reacts to appearance-related comments. Within our study, we used body mass index (BMI) classifications to indicate overweight status. However, a high BMI score (i.e., greater than 25) does not necessarily mean an individual is overweight or obese as BMI does not take into account fat-free mass (i.e., muscle mass).

If you experience any emotional discomfort due to the nature of the questionnaires please either contact student health services (905-688-5550 ext.3243, <http://www.brocku.ca/healthservices>), if you are a student, or the Niagara Region Mental Health Organization at 1-800-263-7215 or www.niagararegion.ca/living/health_wellness/mentalhealth/. Information regarding body image concerns can be found at the following official websites: www.nedic.ca and www.womenshealth.gov/. Please remember that there is normal variety in body sizes and shapes within the population, and all different body sizes and shapes are normal.

If you have any questions, please feel free to contact the researchers (see below for contact information). Thank you again for your help.

Principal Investigator:
 Kimberley L. Gammage
 Associate Professor
 Department of Kinesiology
 Brock University
 905-688-5550 x3772
kgammage@brocku.ca

Principal Student Investigator:
 Lindsay Cline
 PhD Candidate
 Faculty of Applied Health Sciences
 Brock University
 905-688-5550 x5059
lc0500@brocku.ca

Additional Analysis for Study 1

Given the exploratory nature of study 1, the analysis was run using a moderation analysis in addition to the reported mediation (indirect effect) analysis reported in the result section of study 1. Prior to conducting the regression analysis, the two continuous predictor variables (i.e., frequency of positive appearance-related commentary and body appreciation) were centred to reduce multicollinearity. Centering the data consists of subtracting the sample mean from each case for all continuous variables to produce a revised sample mean of zero (Holmbeck, 2002). In addition, product terms were calculated to represent the interaction between the predictor variable (i.e., frequency of positive appearance-related commentary) and the moderator (i.e., body appreciation). For the hierarchical regression, the main effects were entered in step 1 and the product term (i.e., frequency of positive appearance-related commentary x body appreciation interaction) was entered in step 2. For Step 1, the overall model was not significant, $F(2, 101) = 2.84, p = .06, R^2_{\text{adjusted}} = .04$. On Step 2, the overall model remained non-significant ($\Delta R^2 = .005$), with the addition of the interaction term, $F(1, 100) = .48, p = .49, R^2_{\text{adjusted}} = .03$. Therefore, body appreciation did not significantly moderate the relationship between the frequency of positive appearance-related commentary and the effect felt from those compliments.

Holmbeck, G. N. (2002). Post-hoc probing of significant moderational and mediational effects in studies of pediatric populations. *Journal of Pediatric Psychology*, 27, 87-96. <https://doi.org/10.1093/jpepsy/27.1.87>

Study 2 Ethics Clearance



Brock University
Research Ethics Office
Tel: 905-688-5550 ext. 3035
Email: reb@brocku.ca

Social Science Research Ethics Board

Certificate of Ethics Clearance for Human Participant Research

DATE: 3/31/2016

PRINCIPAL INVESTIGATOR: GAMMAGE, Kimberley - Kinesiology

FILE: 14-205 - GAMMAGE

TYPE: Ph. D. STUDENT: Lindsay Cline
SUPERVISOR: Kimberley Gammage

TITLE: Experiences with Appearance-related Comments and Weight Loss

ETHICS CLEARANCE GRANTED

Type of Clearance: NEW

Expiry Date: 3/31/2016

The Brock University Social Science Research Ethics Board has reviewed the above named research proposal and considers the procedures, as described by the applicant, to conform to the University's ethical standards and the Tri-Council Policy Statement. Clearance granted from 3/31/2016 to 3/31/2016.

The Tri-Council Policy Statement requires that ongoing research be monitored by, at a minimum, an annual report. Should your project extend beyond the expiry date, you are required to submit a Renewal form before 3/31/2016. Continued clearance is contingent on timely submission of reports.

To comply with the Tri-Council Policy Statement, you must also submit a final report upon completion of your project. All report forms can be found on the Research Ethics web page at <http://www.brocku.ca/research/policies-and-forms/research-forms>.

In addition, throughout your research, you must report promptly to the REB:

- a) Changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
- b) All adverse and/or unanticipated experiences or events that may have real or potential unfavourable implications for participants;
- c) New information that may adversely affect the safety of the participants or the conduct of the study;
- d) Any changes in your source of funding or new funding to a previously unfunded project.

We wish you suc

Approved:

Jan Frijters, Chair
Social Science Research Ethics Board

Note: Brock University is accountable for the research carried out in its own jurisdiction or under its auspices and may refuse certain research even though the REB has found it ethically acceptable.

If research participants are in the care of a health facility, at a school, or other institution or community organization, it is the responsibility of the Principal Investigator to ensure that the ethical guidelines and clearance of those facilities or institutions are obtained and filed with the REB prior to the initiation of research at that site.

Study 2 Materials

Demographic Questionnaire

Age: _____

Race(s): _____

Occupation: _____

1. Please fill in the following chart indicating during which developmental stage(s) you were overweight in your life time. *Note: If applicable, you can answer yes for being overweight in more than one developmental stage.*

	Were you overweight during this time? (Yes or No)	<i>If YES...for how long of a duration of time were you overweight during this time?</i> <i>(number of months or years)</i>
Early Childhood (before age 8)		
Late Childhood (ages 9-12)		
Adolescence (ages 13-17)		
Young Adulthood (ages 18-35)		

2. What do you believe are some contributing factors to you putting on the excess weight?

3. By what means or methods did you use to lose weight?
(For example, lifestyle behaviour changes, diet program, surgery, etc.)

4. How would you describe your current weight status?

Interview 1 Introduction: *[Get participant to sign the Informed Consent]. Thank you for coming in today to participate in this study. I appreciate you taking the time to talk with me about your story.*

Let's start off with you telling me a little bit about yourself.

- What are some of your general interests? how do you spend your time? (significant other? children? hobbies?)
- What made you decide to join this research study?

Overall, how would you say you view your body?

- How do you see and think about your body?
- How do you feel and act towards it?

1) When I say positive appearance comments, what do you think that is?

- What makes it a positive appearance comment? (characteristics)
- Can you provide a few examples of positive appearance comments you think other women may receive in reference to their appearance?
- Is there a certain setting or context women receive positive appearance comments in? ...if so, what does that setting look like?
- Who do women receive positive appearance comments from most often? Least often?
- Why do you think people say positive appearance comments to women? (their intent)

2) Now what about negative appearance comments, how would you describe those?

- Similarly, is there a certain setting where women are more likely to receive negative comments?
- And what do you think people's intent is when they give negative appearance comments?

3) Can you describe for me what your experience has been like with weight loss?

- What emotions did you feel with the process?
- Have you gone through multiple weight loss attempts? If so, why?
- What strategies have you tried to lose weight?
- Was this something you took on individually, with friends or family, etc.?
- What was your motivation to try and lose weight?

4) How would you describe the appearance comments people said to you BEFORE you tried to lose weight?

- Type? What about (e.g., overall appearance or weight)? frequency?
- How did those comments affect your own view of your body? emotions attached?
- What do you think the intent was behind those comments? (motive)

5) How would you describe the appearance comments people said to you DURING or AFTER you made the effort to lose weight?

- Did you notice a difference?
- How did those comments affect your own view of your body? emotions attached?
- Do you think the intent behind those comments was the same, different?

Interview 2 Introduction: *Welcome back, thanks again for taking the time to speak with me. How has your week/weekend been since we last spoke?*

Ok, well we will continue on with where we ended last time talking about your experiences with appearance commentary both BEFORE and DURING or AFTER your weight loss period.

Last time you were telling me about <insert personal story here>...

So BEFORE your weight loss...

- 1) How much would you say appearance comments affected your day-to-day life?
 - So how much would you say you paid attention to comments?
 - How would you say those comments affected your behaviours (eating, social interaction, physical activity, clothing choices, etc.)
 - In the moment, how would you say you normally responded to negative comments? positive comments? (i.e., coping)
 - Would you say that the way YOU responded is the way other women typically respond?

Now DURING or AFTER your weight loss...

- 2) How much would you say appearance comments affected your day-to-day life?
 - So how much would you say you paid attention to comments?
 - How would you say those comments affected your behaviours (eating, social interaction, physical activity, clothing choices, etc.)
 - In the moment, how would you say you normally responded to negative comments? positive comments? (i.e., coping)
 - Would you say that the way YOU responded is the way other women typically respond?
- 3) Based on your experiences, what would be your advice to other women who are thinking about losing weight?
 - What would you tell these women about how to handle appearance comments (both positive and negative)?
 - Is there something you wish you had done differently?
- 4) On a personal note, moving forward from your experiences, what would you say you have learned about your own body image?
 - What are you doing to make yourself feel good about your body?

Before we end the conversation for today, is there anything you would like to add that you forgot to mention before with anything we have talked about today? Ok, well thank you for coming in today. I really appreciate you being open and talking about your experiences with me.

Excerpts from Interview Transcripts

Excerpt #1 from Interview Discussion with Jessica

L - Um so to kind of jump into the topics. We'll start very broad and then maybe work our way through. So if you want to start off by kind of telling me how you view your body or think about your body from a body image perspective?

J - sure, I think um haha that's an interesting question and part of why I wanted to be a part of it [the study] cause I think that how you view your body vs what your body is, can be very different so I think the way I view my body is a lot about ability so I feel very comfortable with my physical condition in the sense that my ability to do the physical things I want to do in terms of strength and endurance and those sorts of things um but in terms of like the size and the number and the scale, THAT'S where it gets a little disappointing. so Um you know if you look at the BMI chart, I'm technically obese which is kind of awful to think about but I don't think that I am obese, do you know what I mean?

L – yes, I know exactly what you mean.

J - so there is sort of that juxtaposition of like that doesn't apply to me! Um and I find that in a lot of ways the things that you hear people say or think about when they think about somebody who is overweight or obese is like that doesn't really relate to me at all or how I view myself and I think you'd be pretty surprised if you asked people who are actually obese haha and I think that's very apparent in a health care setting.

L - very much so. And how do you deal with that conflict that your mind is very different than what you are saying someone would assume it would be for someone who is overweight?

J - I think for me for someone who was always sort of on the heavier end of healthy, not necessarily because I was heavy, but just because I was athletic. So I was always kind of like, meh that's a number, and I had friends that were like "oh I'm a 105 lbs" and I'm like, "my skeleton weighs 140lbs" haha and it's like we can't talk about this haha we can share clothes haha but, I'm just not little. And that was always fine so I don't get too hung up on

it. Um but sometimes you feel like you need to defend yourself a little bit so um ya I think it's, it's, it comes with age too where you just get to be comfortable in your own skin, or it's like, you know what, this is me and I have a lot more to offer than a 6-pack abs which I don't, I'm sure in there somewhere haha hidden, insulated I say hahahaha

L - haha that's good. And is there any certain behaviours that you engage then in towards your body to kind of reflect your outlook that, this is who I am and...

J - ya! like I said I was always kind of athletic so I had um a sports injury that lead to me gaining quite a bit of weight. um and then just never being able to take it off um so kind of for me it was more important for me to be able to reclaim my mobility and my athletic condition than it was to be the size I was before um so I do a lot of things, I'm very active. I do a boot-camp at like 5:30 in the morning 3 times a week and I do yoga a couple times a week and I bike and I joined a volleyball league and walk my dogs and lots of stuff like that. Um and I think that kind of surprises people sometimes haha when it's like, "what are you doing this weekend?" And it's like, "oh I'm actually competing in a triathlon." And they are like, "OH! haha OH!" haha ya so I think I take care of my body, especially what I eat and stuff like that.

Excerpt #2 from Interview Discussion with Kathy

L –thinking about the intent behind comments, when someone says a positive comment to you, what would you say a person's intent is when they say something?

K – um I think it is normally to be like, to be nice um but it can also be sort of like, them noticing that, you know, that you've put the effort in sort of like I was saying before and you know saying like, hey you look really good, you look like you've been working out or I think it's just sort of to show them that they are noticing that you're starting to look good.

L – and then kind of switching gears unfortunately those negative comments that sometimes you receive, when I say negative appearance commentary what kind of comes to mind?

K – so I think, this one is more difficult because I feel like I don't get a lot of them directly to my face, it's sort of more like off-hand comments I would say, like people being like oh are you going to eat that? Kind of thing, um or like looking at you almost like if you, if you want to eat something that maybe you shouldn't be um other negative things maybe...like I feel like no one would come out and out right and be like, you gained weight, at least not the people I know which is good but I feel like they might say like oh you are looking kind of tired today, did you get enough sleep or they just wouldn't say anything sort of like with my family, like if they tell me I look like I've lost weight then I know that's a good thing and if they don't say anything that I know that I don't really look that much differently than last time or had gained weight since the last time.

L – oh so it's the absence of comments?

K – ya, I feel like if, even if I dress up or put a lot of effort in, like if I'm going out, into my appearance and no one really says anything than I also take that as like, oh I guess I don't look at good as I thought I did, which might be a little oversensitive but that's ya, that's generally how I look at it.

Excerpt #3 from Interview Discussion with Marsha

L – and thinking back to some of those bad body image days when you were younger, how would you say you normally coped in those situations?

M – um so at the last half of it so when I was at university, I wore sweatshirts on a daily basis, I hated the way I looked, I wore a sweatshirt every single day even in July when it was plus 35 [degrees Celsius]

L – with the propose of concealing?

M- yep! Because I didn't want people to see me. And I remember, I worked at Tim Horton's at the time while I was in school and I was at the bus stop waiting to go home and this guy walked up to me and was like, "aren't you dying?" and like, he said it so matter of factly, I'm like no, I'm really cold and it was like 35 out and looking back now I'm like, what the heck was I thinking? But I was so embarrassed of just who I was and

what I looked like that I, not kidding, I wore sweatshirts in 35 degree weather and people obviously looked at me like I was nuts because I was doing it and um I so after I lost all this weight this time, I threw out all of my like wrap sweaters because I used to use those as a way to cover myself up so when I did it this time I was like, you know what, I don't want to be embarrassed, I'm not kidding like I cleaned out my closet I now only have 3 sweaters which is kinda annoying because now it's getting cold out but like I have no clothes hahaha but I had to cause I knew that if I started to do that again I'd get into this habit of well, it's okay if I cheat because no one is going to see me if I wear this really big sweater and now it's like if I'm not feeling good about myself then I know that I'm like, okay let's re-evaluate, are you really doing worse or is this all in your head? Like I got to the point last week where I was like I really need a sweatshirt and really wanted to cover myself up because I felt gross and I'm like let's take a minute and be realistic, wait until tomorrow morning, weigh yourself, see what's going on or if this is in your head. And it was 100% in my head, there was nothing wrong, the scale hadn't changed, the body weight hadn't change, the % body fat hadn't changed, nothing changed. It was all in my head. And I know that I get in these weird spirals, oh my gosh, I'm getting fat and I go to Tim Horton's and I eat timbits and I know it's bad but um ya like sweatshirts were my thing, like I wore sweatshirts and sweatpants like stretchy pants because I knew they would always fit! So I didn't have to take like responsibility even though I hated it, because my clothes still fit, right? Like if I bought a 3XL sweatshirt, of course it's going to fit like I can fit in a large, and it would fit normally but if I buy a giant one it's always going to fit, not matter what I do so that was like that was the later half when I was younger, I just refused to buy bathing suits. Like I never, I think there was a span of 8 years where I didn't even own a bathing suit so that when people asked me, do you want to go swimming? I'd be like, oh I'm sorry, I don't have a bathing suit. So that I could wear a giant t-shirt in the pool and nobody would say anything because I didn't own a bathing suit. Ya.

Excerpt #4 from Interview Discussion with Diane

L - very true, ya so then that's kinda looking at the positive appearance commentary, you also mentioned some instances there of negative commentary. So when you think of

negative appearance commentary how is that intent or that type of comment different than a positive one then? in general.

D - sometimes negative comments they tend to be very direct. I don't blame them, they say the way it is but um

L - as far as, what do you mean?

D - this was an incident that happened with me when I was here and then I went um back home to India and the culture there is very different than the culture here. There is no such thing as being you know politically correct or trying to tone down so that you don't come across as very rude but some people will say things straight to your face and I know that this neighbour of mine told my mother 'watch out what you feed her' right in front of my face. You know um and then he said 'maybe if you don't feed her for a few days it would help'.

L - oh dear

D - I had spent at that point about 5 years in Canada and I was not used to those kinds of comments and it was, I had gone there my parents are still there I'm here by myself so I went there to visit my parents and like very first couple of days everyone body was in shock with my weight gain and um ya um so I think those kinda things to me would be made a huge um impact

L - right, and then thinking about the intent of maybe that neighbour's comment , like, do you believe that they were trying to cause harm or when people say comments like that, what do you think their intent is?

D - A that point I thought he did not I mean, he doesn't know me enough to have any positive you know intent for me. At that point, it was just something he saw and he said I don't know if he meant it in a negative way but I didn't think he meant anything positive for me because he doesn't know me to mean anything well for me so I took that in a negative way completely

Excerpt from Interview discussion with Allison

L - so you mentioned that you've kind of tried to steer away from your body, did you mean like appearance?

A - ya, ya.

L - what was the reasoning for that?

A - I felt when I focused on it, I felt more negative and um that's not my overall goal like I want to be, if I want to be happy then I want to be healthy, and not focused on it, but not that it doesn't come up. like there are some days where I'm like okay, I don't like this, or like certain maybe events where other people are looking really good and I'm like ugh but I try to be like, no right now I'm healthy, I'm feeling good and this is what my end goal is.

L - nice. So in those moments where you see someone else and you think you don't compare to them right now, how do you get yourself through those negative feelings in that moment?

A - ya, ya like maybe they aren't healthy, right? And that's bad so I try to think like okay maybe they're not healthy and then um there is like set weight theory, have you ever heard of it?

L - mmhmm

A - so I believe in that, so their body type and my body type can't compare because we all have kind of a set weight so it's like why would I compare myself AND there are some things that I am not willing to give up to well, maybe they are willing to give up maybe 5 hours a week well maybe this week I am but maybe next week I'm not so it's not worth it for me so it's just like, no that's okay.

L - and was that always the case? was that always your mindset? like since childhood?

A - no! no! I would say only in the last 4-5 years

L - was there something that kind of triggered that, that new mentality about focusing on health? or was it just a maturity thing?

A - ya I think so ya and it's, I can't think of a certain moment

L - I was just curious, like some people have that ah-ha moment where they have this epiphany so I was just wondering if there was a moment for you?

A - no, I think it was more gradual and realizing like I think over time that um if my focus is different than I feel better about myself ya. It's just kind of like a slow journey, like I said there are still those moments.

Debrief Form

Project Title: Experiences with Appearance-related Comments and Weight Loss

Principal Investigator: Dr. Kimberley L. Gammage, Associate Professor, Department of Kinesiology, Brock University

Student-Investigator: Lindsay Cline, PhD Candidate, Faculty of Applied Health Sciences, Brock University

Thank you for participating in our study. In this study, we were interested in finding out more about women's experiences with weight loss attempts, including the negative trials and tribulations as well as the positive experiences that may emerge. More specifically, we wanted to gain a better understanding of how appearance-related commentary affected women's thoughts, emotions and behaviours with regards to weight loss and their overall body image. Appearance-related commentary may perpetuate weight loss attempts, and thus, periods of weight cycling, among women.

Our hope is to use the knowledge we gain from your weight loss experience, and the other women's experiences in the study, to better educate other women on navigating body image issues that may emerge surrounding weight concerns. We understand the topics discussed in the interviews were very personal and may have been difficult to discuss. For that, we thank you for sharing your story to help us in our pursuit.

If you experience any emotional discomfort due to the nature of the research topic please contact either contact Dr. Gammage for information (905-688-5550 ext.3772) or the Niagara Region Mental Health organization at 1-800-263-7215 or www.niagararegion.ca/living/health_wellness/mentalhealth/. Information regarding body image concerns can be found at the following official websites: www.nedic.ca and www.womenshealth.gov. Please remember that there is normal variety in body sizes and shapes within the population, and all different body sizes and shapes are normal. If you have any questions, please feel free to contact the researchers.

Thank you again for your help.

Sincerely,

Principal Investigator:
Kimberley L. Gammage
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Principal Student Investigator:
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Study 3 Ethics Clearance



Brock University
Research Ethics Office
Tel: 905-688-5550 ext. 3035
Email: reb@brocku.ca

Social Science Research Ethics Board

Certificate of Ethics Clearance for Human Participant Research

DATE: August 31, 2015

PRINCIPAL INVESTIGATOR: GAMMAGE, Kimberley - Kinesiology

FILE: 15-010 - GAMMAGE

TYPE: Ph. D. STUDENT: Lindsay Cline
SUPERVISOR: Kimberley Gammage

TITLE: Perceptions of Others

ETHICS CLEARANCE GRANTED

Type of Clearance: MODIFICATION

Expiry Date: 8/31/2016

The Brock University Social Sciences Research Ethics Board has reviewed the above named research proposal and considers the procedures, as described by the applicant, to conform to the University's ethical standards and the Tri-Council Policy Statement.

Modification: online questionnaire option.

The Tri-Council Policy Statement requires that ongoing research be monitored by, at a minimum, an annual report. Should your project extend beyond the expiry date, you are required to submit a Renewal form before 8/31/2016. Continued clearance is contingent on timely submission of reports.

To comply with the Tri-Council Policy Statement, you must also submit a final report upon completion of your project. All report forms can be found on the Research Ethics web page at <http://www.brocku.ca/research/policies-and-forms/research-forms>.

In addition, throughout your research, you must report promptly to the REB:

- a) Changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
- b) All adverse and/or unanticipated experiences or events that may have real or potential unfavourable implications for participants;
- c) New information that may adversely affect the safety of the participants or the conduct of the study;
- d) Any changes in your source of funding or new funding to a previously unfunded project.

We wish you success with your research

Approved:

Sandra Peters, Acting Chair
Social Sciences Research Ethics Board

Note: Brock University is accountable for the research carried out in its own jurisdiction or under its auspices and may refuse certain research even though the REB has found it ethically acceptable.

If research participants are in the care of a health facility, at a school, or other institution or community organization, it is the responsibility of the Principal Investigator to ensure that the ethical guidelines and clearance of those facilities or institutions are obtained and filed with the REB prior to the initiation of research at that site.

Study 3 Materials

Please read the following paragraph and then respond to the questionnaire on the following page

Julia is 30 years old and works as a high school teacher in an urban area. She has taught at the same school for five years now and teaches classes in English, biology, and math. Julia is of average height and has brown eyes and medium-length dark hair. For most of her adult life, Julia has been overweight. Over the past few months, she decided to lose weight and so far has lost about 15 lbs. Julia also has several hobbies outside of teaching, that include attending music festivals, shopping and going out for dinner in the city with her friends.

or

Julia is 30 years old and works as a high school teacher in an urban area. She has taught at the same school for five years now and teaches classes in English, biology, and math. Julia is of average height and has brown eyes and medium-length dark hair. For most of her adult life, Julia has been overweight. Over the past few months, she has put on about 15lbs of additional weight. Julia also has several hobbies outside of teaching, that include attending music festivals, shopping and going out for dinner in the city with her friends.

or

Julia is 30 years old and works as a high school teacher in an urban area. She has taught at the same school for five years now and teaches classes in English, biology, and math. Julia is of average height and has brown eyes and medium-length dark hair. For most of her adult life, Julia has been overweight. Over the past few months, her weight has remained fairly stable. Julia also has several hobbies outside of teaching, that include attending music festivals, shopping and going out for dinner in the city with her friends.

or

Julia is 30 years old and works as a high school teacher in an urban area. She has taught at the same school for five years now and teaches classes in English, biology, and math. Julia is of average height and has brown eyes and medium-length dark hair. For most of her adult life, Julia has been overweight. Over the past few months, her weight has remained fairly stable. Julia is not satisfied and has little appreciation for her body. She has low self-esteem because of her weight, she often talks negatively about her body and overall has a negative body image. Julia also has several hobbies outside of teaching, that include attending music festivals, shopping and going out for dinner in the city with her friends.

or

Julia is 30 years old and works as a high school teacher in an urban area. She has taught at the same school for five years now and teaches classes in English, biology, and math. Julia is of average height and has brown eyes and medium-length dark hair. For most of her adult life, Julia has been overweight. Over the past few months, her weight has remained fairly stable. Julia is satisfied and has great appreciation for her body. She has high self-esteem because of her abilities, she often talks positively about her body and overall has a positive body image. Julia also has several hobbies outside of teaching, that include attending music festivals, shopping and going out for dinner in the city with her friends.

Target Ratings

Based on the paragraph you have just read, please rate the individual described on the following characteristics, by circling the appropriate number:

1. Mean	1	2	3	4	5	6	7	8	9	Kind-hearted
2. Shy	1	2	3	4	5	6	7	8	9	Outgoing
3. Lazy	1	2	3	4	5	6	7	8	9	Works hard
4. Timid	1	2	3	4	5	6	7	8	9	Brave
5. Unintelligent	1	2	3	4	5	6	7	8	9	Intelligent
6. Cold/Distant	1	2	3	4	5	6	7	8	9	Warm/Affectionate
7. Vulnerable	1	2	3	4	5	6	7	8	9	Resilient
8. Sloppy	1	2	3	4	5	6	7	8	9	Neat
9. Dull/Boring	1	2	3	4	5	6	7	8	9	Vibrant/Lively
10. Sad	1	2	3	4	5	6	7	8	9	Cheerful
11. Lacks self-confidence	1	2	3	4	5	6	7	8	9	Has self-confidence
12. Arrogant	1	2	3	4	5	6	7	8	9	Modest
13. Unsociable	1	2	3	4	5	6	7	8	9	Sociable
14. Stubborn	1	2	3	4	5	6	7	8	9	Agreeable
15. Lacks self-control	1	2	3	4	5	6	7	8	9	Has self-control
16. Selfish	1	2	3	4	5	6	7	8	9	Selfless
17. Unattractive appearance	1	2	3	4	5	6	7	8	9	Attractive appearance
18. Tired	1	2	3	4	5	6	7	8	9	Energetic
19. Overweight	1	2	3	4	5	6	7	8	9	Underweight
20. Not athletic	1	2	3	4	5	6	7	8	9	Athletic
21. Physically sickly	1	2	3	4	5	6	7	8	9	Physically healthy
22. Has unattractive body shape	1	2	3	4	5	6	7	8	9	Has attractive body shape
23. Unfit	1	2	3	4	5	6	7	8	9	Fit
24. Unappreciative of her body	1	2	3	4	5	6	7	8	9	Appreciative of her body
25. Unfeminine body shape	1	2	3	4	5	6	7	8	9	Feminine body shape
26. Very little muscle tone	1	2	3	4	5	6	7	8	9	Noticeable muscle tone

Demographic Information

Age: _____

Race(s): _____

Year in School: _____

Major: _____

Height: _____

Weight: _____

At some point in your life, have you attempted to lose weight? _____

Which of the following statements best describes you? Please circle **ONE** statement.

(a) Compared to one year ago, I currently **weigh less** than I did
If so...roughly how much less do you weigh _____

(b) Compared to one year ago, I currently **weight about the same** as I did

(c) Compared to one year ago, I currently **weigh more** than I did
If so...roughly how much more do you weigh _____

Please circle **ONE** of the following statements below that best describes how you feel:

a) Overall, I mostly have a *positive* body image

b) Overall, I have neither a positive nor a negative body image
(neutral)

c) Overall, I mostly have a *negative* body image

BAS-2

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Please indicate whether the question is true about you never, seldom, sometimes, often, or always.

	1 Never	2 Seldom	3 Sometimes	4 Often	5 Always
1. I respect my body.	1	2	3	4	5
2. I feel good about my body.	1	2	3	4	5
3. I feel that my body has at least some good qualities.	1	2	3	4	5
4. I take a positive attitude towards my body.	1	2	3	4	5
5. I am attentive to my body's needs.	1	2	3	4	5
6. I feel love for my body.	1	2	3	4	5
7. I appreciate the different and unique characteristics of my body.	1	2	3	4	5
8. My behaviour reveals my positive attitude toward my body; for example, I hold my head high and smile.	1	2	3	4	5
9. I am comfortable in my body.	1	2	3	4	5
10. I feel like I am beautiful even if I am different from media images of attractive people (e.g., models, actresses/actors).	1	2	3	4	5

BD

For each item, decide if the item is true about you **ALWAYS**, **USUALLY**, **OFTEN**, **SOMETIMES**, **RARELY**, or **NEVER** using the following scale:

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

	Always	Usually	Often	Sometimes	Rarely	Never
1. I think that my stomach is too big.	1	2	3	4	5	6
2. I think that my thighs are too large.	1	2	3	4	5	6
3. I think that my stomach is just the right size.	1	2	3	4	5	6
4. I feel satisfied with the shape of my body.	1	2	3	4	5	6
5. I like the shape of my buttocks.	1	2	3	4	5	6
6. I think that my hips are too big.	1	2	3	4	5	6
7. I think that my thighs are just the right size.	1	2	3	4	5	6
8. I think that my buttocks are too large.	1	2	3	4	5	6
9. I think that my hips are just the right size.	1	2	3	4	5	6

AFA

Instructions: For each item, please circle the number that best characterizes the extent to which you disagree/agree with each statement.

	Very Strongl y Disagre e	Strongl y Disagre e	Disagre e	Disagree Somewh at	Unsur e	Agree Somewh at	Agre e	Strongl y Agree	Very Strongl y Agree
1. Few of my friends are overweight or obese	1	2	3	4	5	6	7	8	9
2. I tend to think that people who are overweight are a little untrustworthy	1	2	3	4	5	6	7	8	9
3. Although some overweight people must be intelligent, generally I think they tend not to be	1	2	3	4	5	6	7	8	9
4. I have a hard time taking overweight people too seriously	1	2	3	4	5	6	7	8	9
5. Fat people make me somewhat uncomfortable	1	2	3	4	5	6	7	8	9
6. If I were an employer, I might avoid hiring an overweight person	1	2	3	4	5	6	7	8	9

7. I dislike people who are overweight or obese	1	2	3	4	5	6	7	8	9
8. I feel disgusted with myself when I gain weight	1	2	3	4	5	6	7	8	9
9. One of the worst things that could happen to me would be if I gained 10kgs (i.e., 22 lbs)	1	2	3	4	5	6	7	8	9
10. I worry about becoming fat	1	2	3	4	5	6	7	8	9
11. People who weigh too much could lose at least some part of their weight through a little exercise	1	2	3	4	5	6	7	8	9
12. Some people are overweight because they have no willpower	1	2	3	4	5	6	7	8	9
13. It is people's own fault if they are overweight	1	2	3	4	5	6	7	8	9

Debrief Form

Brock University, Faculty of Applied Health Sciences Debriefing Form

Title of Study: Perceptions of Others Study
Principal Researcher: Dr. Kimberley Gammage, Associate Professor,
 Kinesiology, Brock University
Principal Student Investigator: Lindsay Cline, PhD Candidate, Applied Health
 Sciences, Brock University

Thank you for participating in our study. In this study, we were looking at personal characteristics that influence our perceptions of other people, specifically our perceptions of individuals who are overweight. You were provided with 1 of 5 different descriptions of a hypothetical person. The other descriptions varied slightly with respect to the weight trajectory (i.e., if they were described as losing, gaining or maintaining weight) or with respect to their own body image views (i.e., described as having a positive or negative body image). We were interested in understanding if these different descriptions influenced people's perceptions of physical and personality characteristics. In addition, we were also interested in whether your own weight trajectory, body image and physical activity influenced your perceptions of others.

If you experience any emotional discomfort due to the nature of the questionnaires please either contact Dr. Gammage (see contact information below), student health services (905-688-5550 ext.3243, <http://www.brocku.ca/healthservices>), or the Niagara Region Mental Health Organization at 1-800-263-7215 or www.niagararegion.ca/living/health_wellness/mentalhealth/. Information regarding body image concerns can be found at the following official websites: www.nedic.ca and www.womenshealth.gov/. Please remember that there is normal variety in body sizes and shapes within the population, and all different body sizes and shapes are normal.

If you have any comments or concerns about your rights as a research participant, please contact the Research Ethics Office at 905-688-5550 ext. 3035, reb@brocku.ca. If you have any questions about the research study, please feel free to contact the researchers.

Thank you again for your help.

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**This study has been reviewed and received ethics clearance through Brock University
 (file #15-010)**